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ABSTRACT

The first volume of this final report of a large study that detailed the day-to-day workings of, and student response to, two philosophically different approaches to reading readiness as they were used in six Philadelphia (Pennsylvania) kindergartens reports on the literate environment approach. The background section explains that this approach consists of (1) periods in which children can pretend read, discuss books with friends, or print; (2) time for teachers and volunteers to read and reread stories to the children; (3) follow-up activities related to those stories, including dramatizations; (4) sustained silent reading time; (5) activities to foster metalinguistic awareness; and (6) the provision of a phonics workbook for children who become interested in learning to decode. The methodology section describes how the study draws on the techniques of ethnographers and adopts the methodology of naturalistic observation, noting that researchers observed and recorded teachers and students for 55 full sessions and documented what happened during 169.1 hours of classroom time. The section further explains that because the approach represented an innovation, the teachers who volunteered to implement it received extensive training and support. The third section describes the literate environment approach to reading readiness, and the final section describes the children's response to the approach. No attempt is made to compare the approach of this volume with the second or "traditional" approach that is reported in the second volume. (HOD)

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FINAL REPORT

to

NATIONAL INSTITUTE OF EDUCATION

Title: A DESCRIPTIVE STUDY OF TWO PHILOSOPHICALLY DIFFERENT APPROACHES TO READING READINESS, AS THEY WERE USED IN SIX INNER CITY KINDERGARTENS

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Abstract

A DESCRIPTIVE STUDY OF TWO PHILOSOPHICALLY DIFFERENT APPROACHES TO READING READINESS, AS THEY WERE USED IN SIX INNER CITY KINDERGARTENS

by

Lynne Putnam

Although American educational researchers have been conducting reading readiness "methods" studies for over 50 years, this study breaks new ground both in its focus, and in its methodology.

The primary focus is on the reading-related behaviors of three classes of inner city kindergarteners exposed to a curriculum which seeks to duplicate the kind of "literate environment" common to the homes of "early readers" (children who learn to read before coming to school, generally without formal instruction). The curriculum emphasizes listening to and dramatizing stories, spontaneous printing and pretend reading sessions, sustained silent reading periods, auditory analysis activities and the use of a Syllabary. Only one previous study has tested a curriculum based on similar research principles (Durkin, 1974-75), and that study included no observational data.

A secondary focus is on the reading-related behaviors of three classes of inner city kindergarteners exposed to traditional, sub-skill oriented reading readiness programs - emphasizing workbook and whole group activities in visual discrimination, auditory discrimination, letter naming and comprehension. Despite the fact that the sub-skill approach to reading readiness has dominated in the U.S. for the past 50 years, it has never been the subject of a major observational study.

Until now, reading readiness studies have relied on pre- and post-test data. Thus we enter 1981 with virtually no solid data examining the learning process children go through in the classroom. This study, however, is ethnographic in nature. Using field notes, tape recordings, and print artifacts, two site researchers (including the author) describe in detail the classroom learning environment and children's literacy-related responses in the two kinds of curricular settings.

The study population consists of 164 children in 6 classrooms in 5 Title I eligible Philadelphia schools (two parochial schools, three public schools). Of that number, 156 are black; 7 are white; 1 is Vietnamese. The majority are from low socioeconomic status families.

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INTRODUCTION

"Reading readiness" can be defined as "the stage in development when, either through maturation or though previous learning, or both, the individual child can learn to read easily and profitably." (Downing and Thackray, 1975, p. 10)

American researchers have been investigating reading readiness - both what it is and how to develop it - ever since the term first appeared in an educational publication in 1925. The bulk of their research energies have flowed in one of two directions: either into correlational studies aimed at locating prereading variables with the strongest statistical relationships to beginning reading success, or into "methods" studies aimed at testing techniques for developing skill in various prereading areas.

In some respects the study reported in this volume falls into the latter category. In terms of focus and methodology, however, it is quite different from any published American reading readiness methods study to date.

In order to appreciate the extent and significance of that difference, one first has to appreciate the usual manner in which methods studies are conducted, and their inherent weaknesses.

THE LIMITATIONS OF READING READINESS "METHODS" STUDIES

Methods studies in the area of reading readiness have been terribly limited in scope. For one thing, they have tended to focus on instructional units that are just pieces of an overall instructional program (for example, training in just letter discrimination, or training in just blending of sounds). More importantly, however, they have committed the same significant error of omission as American reading and educational research in general.

Most educational research makes use of a correlational/statistical paradigm. Typically, an investigation takes the form of seeking a correlational co-efficient to express the relationship between a variety of variables on the one hand (such as abilities in the child,

conditions in the home environment, instructional content, or attitudes of parents and teachers) and student achievement on the other hand.

Two British researchers, Stubbs and Delamont (1976), point to the irony of such an approach:

> ...one of the major faults in educational research is the almost total neglect of classroom studies - inside classrooms. It is a paradox that research concerned with teaching and learning has often so assiduously avoided looking directly at what happens between teacher and pupil....Educational research has tried to find the key to understanding educational processes by staying outside the classroom, and administering tests and questionnaires to samples of "subjects." Such research is easy to handle. But it is unclear whether there is any relation between such data and what goes on inside classrooms. (preface)

Their point is well taken. The correlational, pre- and post-test approach to intervention studies imposes a severe limitation. It provides a basis for drawing superficial conclusions about test performance outcomes of certain curricula, but offers no information concerning the learning process students have engaged in. How do children respond to a curriculum; what kind of discussion and behavior ensues; what stages do they go through in mastering the content? These kinds of questions are eclipsed from consideration.

The door is also closed on the kind of information which practitioners could make direct use of. "Those in the day-to-day action of teaching and providing environments for learning need detailed descriptions of practices and programs which worked or failed to work, and the conditions or contexts which created change for students and programs" (Heath, 1980).

Methods studies, then, have looked at skill acquisition in the absence of classroom context. They have neither defined the workings of the curricula they purport to test, nor scrutinized the social interactions which lie at the heart of the learning process.

In the past two decades, anthropologists have begun to enter the classroom to fill in this gap. They have documented the unwritten rules which guide academic-related behavior; they have observed teacher-student interaction; they have detailed the kind of differential

treatment accorded children in high and low ability groupings. What they have not investigated, however, is skill acquisition.

Given the pattern of American educational investigation we have just outlined, it is not surprising that the only two descriptive classroom studies relevant to reading readiness that have been published to date, were conducted by a researcher in New Zealand on the one hand, and by an American anthropologist on the other hand.

In both cases, however, the researchers focussed on only one side of the coin. Marie Clay (1966) focussed on the development of literacy-related skills of 100 5-year-olds during their entry year of schooling in New Zealand; she did not, however, depict the instructional procedures or social interaction of the classroom environment. In documenting the experiences of low-income black youngsters in a St. Louis kindergarten, Ray Rist (1973) paid particular attention to the manner in which the teacher sorted out the children whom she felt would get ahead from those whom she felt would not, and how she treated them differently. He did not, however, provide detail regarding the skill development of the children.

Thus, in the area of reading readiness, as in other areas, we still do not have classroom studies which integrate a focus on all the following perspectives at once: the "method"; teacher goals, behaviors and directives; the social interaction of students; and the process of skill acquisition.

It is our belief that descriptive classroom studies which integrate an exploration of these four perspectives are needed. It is our hope that the study reported in this volume will suggest one way in which this might be accomplished.

FOCUS OF THE RESEARCH

The essential purpose of this study was to detail the day-to-day workings of, and student response to, two philosophically different approaches to reading readiness. Six Philadelphia kindergartens participated in the research: three of them followed a "literate environment" approach to reading readiness, and three followed a "traditional" prereading skills approach.

Two of the kindergartens were located in parochial schools and held full-day sessions; four were located in public schools and held half-day sessions. The schools in which they were situated were all eligible for Title I funding, indicating that much of their studnet population came from low socioeconomic status families.

A total of 164 children attended the research classes. Of that number, 156 were black, 7 were white, and one was Vietnamese.

The Two Curricular Approaches Under Investigation

The "literate environment" approach was conceptualized by one of the researchers (Putnam), on the basis of implications from three areas of the research literature: studies of "early readers" (children who learn to read at home, informally, prior to entering kindergarten); cognitive developmental theory about how children learn in general; and psycholinguistic research into the conceptual hurdles involved in the beginning reading process. Of these, the "early reader" studies provided the most powerful clues. Indeed, the "literate environment" approach might be considered an attempt to duplicate in the classroom those same learning experiences and conditions which appear to characterize the home environments of "early readers."

Specific curricular experiences associated with the "literate environment" approach include periods in which children can pretend read, discuss books with friends, or print; time for teachers and volunteers to read and re-read stories to the children; follow-up activities related to those stories, including dramatizations; sustained silent reading time; activities to foster metalinguistic awareness, and the provision of a phonics workbook for children who became interested in learning to decode.

The second approach that was studied is "traditional" in the sense that it has been the favored approach to reading readiness for the past 50 years. Called the "prereading skills" approach, its underlying assumption is that success in learning to read is best assured if mastery in certain foundation skills precedes instruction in decoding. The foundation skills which are most often emphasized fall into four areas: visual discrimination, auditory discrimination, letter naming and comprehension.

Specific curricular experiences associated with this approach in the three kindergartens we studied included formal reading readiness lessons (using commercially published materials), teacher-created lessons, storyreadings and a variety of literacy-related activities which could be engaged in during free play time.

Methodology

Because the "literate environment" curriculum represented an innovation, the teachers who volunteered to implement it needed extensive training and support. This was supplied in the form of a course at the University of Pennsylvania prior to the start of school, classroom assistance provided by the project director, monthly meetings of teachers and researchers, and direct feedback from the observational notes taken in their classrooms.

In contrast to the "literate environment" teachers, the "traditional" approach teachers received no training, primarily because the goals of the researchers was to document what occurred in those classrooms as they were. It was feared that any tinkering - in the form of training sessions - might have altered the very phenomenon the researchers set out to explore.

If this were a conventional curriculum comparison study, of the "Method A versus Method B" variety, the research design would be considered highly flawed. The fact that one group of teachers was trained, while another group was not, would leave the researchers wide open to charges they had stacked the decks in favor of their own "literate environment" approach. In addition to the lack of controls, the omission of pre- and post-testing would be considered a grave weakness.

As things stand, however, this is not a conventional curriculum comparison study - a point which must be made forcefully, from the start. The object of the study was not to compare student outcomes in the two curricular approaches. Rather, the object was to document the day-to-day workings, and the learning process, associated with each curricular approach individually. The guiding question, in other words, was not "Which approach is better?" but rather "What happens in each approach?"

The kind of statistical research designs ordinarily employed by reading researchers would, of course, prove quite insufficient to answer the question "What happens?" Instead, the researchers drew on the techniques of ethnographers, and adopted the methodology of naturalistic observation.

Armed with paper, pen, and tape recorder, they observed kindergarten sessions in their entirety, documenting as accurately as possible what was said and done by teachers and students. Whenever feasible, literacy events were tape recorded, and the transcriptions woven into typed versions of field notes. In addition, children's print artifacts were collected.

The first observations were not conducted until six weeks after the start of school (which was delayed in the case of the public schools by a three weeks' teachers' strike in September). Those first six weeks were devoted both to helping the "literate environment" teachers implement their program to the point where it matched the original conceptualization, and to locating "traditional" approach kindergarten teachers who would participate in the study.

Initially, observations focussed on all the children in a class. Towards the end of January, however, two case study children were selected for each kindergarten, and from then on the focus of observations alternated between the whole class and case study children.

Most observations were conducted by one researcher working alone, with the "literate environment" classrooms generally observed by the project director (Putnam), and the "traditional" approach classrooms generally observed by the research assistant (Watkins). There were three occasions during the year when the arrangement was different, however. For the first (or baseline) observation of each classroom, as

well as for a mid-term and final observation, both researchers worked as a team. Each took notes on a different aspect of classroom activity, and both perspectives were blended into the final typewritten version.

All totalled, the researchers conducted 55 full-session observations of the six kindergartens participating in the study. They documented what happened during 10,145 minutes (or 169.1 hours) of classroom time, and produced 818 single-space typewritten pages of field notes.

HOW THE STUDY WILL BE REPORTED

In order to avoid the conventional expectations associated with curriculum comparison, or "methods" studies, we have decided to report our research as if it were two separate studies. Part One will consist of the description and analysis of the "literate environment" approach to reading readiness. Part Two will consist of the description and analysis of the "traditional" prereading skills approach.

Each of these reports stands on its own. Each contains its own review of the literature, explanation of methodology, description of curriculum, analysis of student response, and conclusions.

While comparisons between the two approaches may be implicit in the separate descriptions of their operation, no attempt will be made to draw explicit comparisons between the two..

PART ONE:

THE "LITERATE ENVIRONMENT" APPROACH TO READING READINESS

Report Prepared
by
Lynne Putnam

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I. BACKGROUND TO THE STUDY:
RATIONALE FOR A "LITERATE ENVIRONMENT" APPROACH TO READING READINESS

Three basic considerations went into the development of the experimental curriculum:

- What are the environmental conditions that seem to facilitate success in learning to read?
- What is there about the initial stage of learning to read that poses difficulty for many children?
- How is it that children go about learning in general?

Analysis of the literature in those areas led to the development of a readiness program which concentrates on 1) the creation of a "literate environment," 2) activities to help children grapple with the alphabetic principle, and 3) activities which allow for active response, choice, and peer interaction on the part of the children.

THE POTENCY OF A LITERATE ENVIRONMENT

For several decades studies have found a significant correlation between children's reading achievement and aspects of their home literate environment - as measured by number of books in the home, frequency with which young children are read to, parents' reading habits, trips to the library, etc. (Almy, 1949; Sheldon and Carillo, 1952; Miller, 1969; Lamme and Olsted, 1977) This relationship has surfaced in major cross-cultural studies as well (Malmquist, 1959; Thorndike, 1973; Sakamoto, 1975).

The point of these studies may be summarized briefly. In general, good readers tend to come from families where they were read to frequently as children, where they had ready access to reading materials, and where their parents liked to read. In general, these opportunities exist to a greater extent in middle and upper socioeconomic status families, where parents have more education as well as more money.

These correlational studies are not very informative, though, because the measures which are used to gauge the extent of reading-related experiences in the home are superficial. "Number of books in the home," for example, conveys very little about the kind of interaction that occurs between parent and child during literacy events.

Studies of early readers (children who come to school already knowing how to read, generally without formal instruction) are far more informative. Their potential significance is well stated by Clark (1975):

> The study of children for whom learning to read was speedy, effortless and an enjoyable task achieved in an informal unstructured setting should...contribute to the understanding of the process of learning to read. (p. 19)

The most important large group study of early readers in this country was carried out by Dolores Durkin (1966). In 1958 she interviewed the parents of 49 children who had been identified as early readers from among 5,103 children beginning first grade in Oakland, California. A few years later she interviewed the parents of 30 early readers in New York, as well as the parents of 30 non-early readers, matched on the basis of sex, IQ and classroom teacher.

The comparison with non-early readers in the New York study revealed that, for the most part, the early readers were not different in terms of personality traits or abilities from non-early readers. They were not special children, in other words. Rather it was their experiences which were special.

All of their parents read to them regularly, answered their questions about print readily, and provided them with materials related to reading and writing. In addition, their parents tended to be enthusiatic readers, who apparently served as important reading models for the youngsters.

Durkin's study was significant not only for what it revealed about the parents' role in stimulating early reading, but also for what it revealed about the process the children went through. Three patterns, in particular, have relevance for instructional programs.

1) The children's interest in learning to read appeared to have been stimulated by having books read to them, by T.V. and print in the environment, and by seeing their parents and siblings read.

2) The process of learning to read tended to be initiated and directed by the children themselves, through the questions they asked. They were apparently effective at asking the "right" questions to

get the information they needed to construct hypotheses about the writing system.

3) Printing played a dominant role in the early reading process. Over half of the early readers exhibited interest in printing either prior to, or simultaneously with, an interest in reading. That interest apparently led to questions about spelling which, in turn, seemed to lead to learning to read. Thus the early reading phenomenon was characterized by a "language arts" flavor: the interest in encoding was as natural as the corollary interest in decoding.

Remarkably similar findings were reported a decade later by Margaret Clark (1975) in her study of 32 Scottish "early readers."

Informative as these two large group studies are in terms of experiences that are apparently shared by early readers, they nonetheless fall short in giving details of the process the children went through, because they have relied on parents' retrospective accounts.

It is the small but growing body of observational accounts (mostly by researcher parents) of preschoolers' encounters with books and print that yield the best clues into the process early readers go through. (White, 1954; Butler, 1975; Crago, 1975; Söderbergh, 1977; Rhodes, 1979; Bissex, 1979; Doake, 1979)

Several of these diary accounts indicate that one of the earliest stages of response to the lap-reading experience is "pretend reading," in which a child will adopt the intonations of a reader, using picture cues, prior knowledge of a story, and familiarity with book language to give a rendition of the story. Bissez (1979), in describing the "pretend reading" of her son when he was 2½, observes that although he was "not yet decoding, he was nonetheless 'rehearsing' reading in a global way. He had the notion that reading is for meaning; he had the basic book-wise behaviors of spatial orientation, and book talk." (p. 166)

After taping and studying the "pretend reading" of several preschoolers in Canada, David Doake (1979) writes:

> In the early stages of this reading-like behavior, children will attempt to retrieve the story or parts of the story by using the pictures and pages as cues. They will reconstruct the story in terms of their own inter-

> pretation and language competence and will produce initially, a page of story précis of the original. Invariably, they will begin to spend surprising amounts of time with these much-loved books, 'reading' them to themselves, their dolls or pets, or anyone who want to listen. (p. 6)

The next stage, after this first global attempt to read, is likely to be the recognition of some sight words, either from familiar stories of an environmental print (street signs, food labels, etc.). Although this recognition is initially prompted by context clues and memory, it seems to lead to questions about what other words say, about how to spell words, (an interest in printing is often strong at this time), and, in general, attempts to piece together the system of phoneme-grapheme correspondences. At this point in the progress towards reading, graphophonic cues take precedence over the semantic and syntactic cues which prevail during the earlier "pretend reading" stage. (Bissex, 1979; Doake, 1979; Clay, 1972)

Examination of the early reading process revealed in case study accounts, as well as in the large group studies, leads us to the following conclusion: <u>the manner in which most reading readiness and beginning reading programs have children go about learning to read is very different from the process children actually go through when surrounded by a "literate environment" and left to their own devices</u>.

Would it not be better, we wonder, for reading readiness programs to replicate the environmental features and principles that appear to be operating in instances where it is documented children have learned to read successfully and without difficulty?

Essentially that is what we propose to do in our "literate environment" curriculum. Drawing from information in the "early reader" studies, we intend to create a classroom learning environment which duplicates the key experiences and opportunities which appear to be characteristic of the home learning environments of children who learn to read, without formal instruction, before arriving at school.

Emphasis will be placed, then, on "hooking" children on reading and printing. Teachers will read aloud to children for greater amounts of time than would considered standard for kindergarten. In particular,

favorite stories will be read and re-read. Parents and community people will be invited into the classroom to read to children one-on-one, thereby duplicating the lapreading experience which seems to play a prominent role in the history of "early readers."

The teachers, as an adult model for the children, must display an enthusiasm for reading and print, giving it status in the children's eyes.

Materials, like books for reading and paper and magic markers for printing, must be readily available.

Opportunities should be structured which allow children to spend sustained periods of time reading to themselves and each other, and printing. In other words, the "habit" of reading and printing should be encouraged.

These opportunities should be structured in such a way that the children remain in control of the learning to read process. While the teacher might suggest certain kinds of literacy activities, it is essentially the children who should choose whether to participate, what to read, what to print, and make suggestions for other activities. Their questions and their display of interest should guide the teacher.

If the children are to be given this kind of initiative, then it is imperative that the teacher (and any aides) be responsive to their questions about print, and praise their efforts at pretend reading and printing. Since they are responsible for fuelling the children's interest in literacy, they must also be responsible for supplying the kind of information that is necessary for the children to progress in reading and printing.

In this kind of an environment, literacy activities are interwoven into the day's activities, rather than being segregated from other kinds of activities and limited to specific lesson times.

HELPING CHILDREN UNDERSTAND THE ALPHABETIC PRINCIPLE

Ideally a reading readiness program should prepare children to overcome potential stumbling blocks in the learning to read process. A question of some importance, then, is whether there is anything about the reading task which poses particular difficulty for a child in the initial stage of attempting to break the code.

The theoretical work of Rozin and Gleitman (1977) offers a well-reasoned answer to that question.

In their view "the fundamental conceptual problem in reading acquisition is psychoacoustic: It has to do with awareness of phonological segmentation." Three perceptual-conceptual problems in particular confront the beginning reader:

1) the phoneticization problem (understanding that print tracks sound)
2) the phoneme problem (identifying letter/sound correspondences)
3) the blending problem (combining these letter/sound units)

Even youngsters who have been exposed to some kind of reading program can fail to grasp the basic principle that printed letters represent sounds, as was demonstrated by Rozin et al. (1974). In that study, a representative group of suburban and inner city second graders were presented with an ingenious test, consisting of pairs of one short and one long written word, both beginning with the same sound. They were then told: "one of these words says MOW and one says MOTORCYCLE: Which one says MOW?" Note that to answer that question, it is not necessary to know how to read; it is only necessary to know that letters represent sounds, so that words which take longer to say will contain more squiggles. The suburban youngsters (middle-income) answered correctly; the inner city youngsters (low-income) did not.

If insight into the alphabetic principle eludes many youngsters, so does the facility to conceptualize the phoneme. Several studies testify to the difficulty. Bruce (1964) found that children had to have a mental age of 6 before they could delete a phoneme in a task like "stand - t = sand." Liberman et al. (1974) found that half of her 4-year-old subjects could identify a number of syllables, but none

could segment them into phonemes. Age seemed to help, though: 17% of the 5-year-olds could segment words into phonemes, and 70% of the 6-year-olds were able to do so. Finally, a study by Calfee (1972) discovered that although visual tasks posed no problem for kindergarteners, tasks involving acoustic-phonetic manipulations did; they could not segment words into phonemes or establish sound-symbol relationships.

There are two reasons why the phoneme is difficult to access. One reason, as the laboratory work of Liberman and associates has made clear, is that no one-to-one correspondence exists between the phoneme and the sound stream. When the pronunciation of a given word is slowed down, the smallest unit to remain intact is the syllable. Sounds within the context of the syllable are too overlapping to remain intact. It is not natural, therefore, to "hear" a single sound for a single letter. That is a conceptual task, as is the blending of sounds corresponding to letters. "Puh-ah-tuh" do not, in reality, add up to "pat."

The second reason why it is difficult to make the phonemic unit accessible is that our language functions appear to be "tightly wired" to our speech perception and production apparatus. While children can discriminate sounds, and do so constantly in the course of producing speech, they are not aware of the sound properties of language outside that context. Being aware of sounds is as unnatural as being aware of the adjustments our nervous systems make to control the distribution of blood to various parts of our bodies. The unconscious mind is in control of the function, but the conscious mind does not think about it.

One of the most fundamental tasks, then, for a beginning level reading program is to make conscious for the child what he knows unconsciously about sounds. In fact, a major puzzle in reading - knowing that words can be broken into phonological pieces - can be solved before a child ever sees the printed page. Once his attention has been drawn to the sounds of spoken language, he is ready to learn how those sounds are represented in writing.

One way to focus a child's attention on sounds is to provide games and exercises which break words into phonological pieces. An Auditory-Motor Skills Program, developed by Jerome Rosner (1973), does just that: it helps children isolate and manipulate the sound units of words, then syllables, and finally, phonemes.

For the purpose of the "literate environment" curriculum, it is primarily the format of Rosner's exercises that we propose to use, and not the content. Instead of using the practice words he recommends, and the stories he includes specifically to accompany each lesson, our teachers will make use of words that are central to stories their kindergarteners are already acquainted with. In that way, all auditory analysis skillwork can hook into a pre-existing and meaningful context.

Another way to help children gain phonological awareness is through use of a Syllabary. Gleitman and Rozin hypothesize that since the phoneme is so inaccessible to consciousness, and since we have not as yet developed a method for "teaching" the phonetic unit, it should be ignored in the initial stage of learning to read. Instead, a beginning program should focus on a concrete, more readily accessible phonological unit: the syllable.

They propose that through use of a syllabary (which provides a picture representation of each syllable), children can be introduced both to the sound/symbol relationship and the concept of blending. Theoretically, this should place them in a more advantageous position to perceive the phoneme.

IMPLICATIONS FROM COGNITIVE DEVELOPMENTAL THEORY

A third consideration in developing the experimental curriculum was the question of how children go about learning in general. It was a consideration with important implications for curriculum process, even more than content.

Essentially the experimental curriculum we propose incorporates two implication from cognitive developmental theory, both of which mirror implications from the early reader studies: first, children learn by doing; secondly, they need opportunities for choice and individual response in order to accommodate individual variations in interests and abilities.

1) The learning by doing principle

In Piagetian theory, the learning process is characterized by a continuous and complex interaction between child and environment. The child is constantly assimilating new information into his currently existing cognitive structure. He both modifies his cognitive structure to accomodate the incoming information, and modifies the incoming information to accommodate his cognitive structure. Information and experiences are digested, transformed, and, above all, acted upon - they are never swallowed whole.

It is the active nature of the learner that is the crucial point.

> ...the child, or for that matter the adult, must discover understanding for himself. He must actively invent and re-invent what he wants to understand, for understanding, as Piaget puts it, is a transformation of reality. To know something is not merely to be told it or to see it but to act upon it, to modify and transform it and to understand the process, and consequences of of transformation.
>
> (Silberman, 1970, p. 216)

Making provision for the active learner can mean providing concrete materials that can be explored and manipulated; it can mean providing opportunities for play; and it can mean providing opportunities for peer interaction.

> "When I say 'active,'" Piaget declares, "I mean it in two senses. One is act-

> ing on material things. But the other means doing things in social collaboration, in a group effort...where children must collaborate with each other. This is an essential factor in intellectual development. Cooperation," he adds, "is indeed co-operation."
> (Silberman, 1970, p. 219)

What does all this mean for our readiness curriculum?

Perhaps the major implication is for how children come to "comprehend" what is read to them. The roots of reading comprehension, Piagetian theory would suggest, lie in the opportunity to act upon what is read. A key element in the curriculum we developed, therefore, will be an emphasis on children actively responding to literature that is read to them - through dramatization (puppet re-enactments and pantomime, as well as dramatic play), artwork (illustrating a scene, or perhaps making flannelboard cutouts which can then be arranged in sequence as a story is being re-read); composing (simply re-telling a story, or adding a new twist), discussion (which involves real dialogue), and choral reading. (Note how different this approach to reading comprehension is from the traditional curriculum's emphasis on factual recall questions which generally call for one right answer and which serve to "quiz" a student about what has been read.)

The suitability of such an approach seems to be corroborated by evidence from a mother's diary account of her preschool daughter's responses to the books that were read to her between the ages of 2 and 5 (White, 1954). One of the obvious patterns to the child's responses over the years was a penchant for acting out stories - incorporating various aspects of their plot, characterizations and even vocabulary into her dramatic play. Peter Rabbit, for example, provided a good many scenarios: setting off for the baker's with umbrella and basket in hand, whilst calling out a warning not to go into Mr. McGregor's garden; crawling about on all fours hunting for radishes to eat; hiding from Mr. McGregor in the shed, as the farmer (played by her mother) searches for the naughty rabbit under invisible flower-pots; and periodically requesting camomile tea, or announcing that her tummy is sore and she wants parsley.

It was through these repeated and varied re-enactments that the

young child appeared to digest the stories that were read to her. Such dramatization are probably the most natural and most significant responses to literature a young child can make.

2) Solving the problem of the "match"

Given the nature of the learning process - i.e. a constant interaction between learner and the environment - individual differences are inevitable. Since no two children will have had exactly the same experiences, no two children will have identical cognitive structures. They will have different interests, and they will be in different states of preparedness to deal with certain information or tasks. This means that what would be an appropriate "match" of materials, information or task for one child might not be for another child. Yet finding a suitable match is desirable, for it is when the experience is just slightly novel (somewhat familiar but somewhat new) that the most learning takes place.

The issue for practitioners, then, is how to solve the problem of the "match"?

> The solution for the teacher...is not to tailor narrow exercises for individual children, but rather to offer situations in which children at various levels, whatever their intellectual structures, can come to know parts of the world in new ways.
>
> (Duckworth, 1979, p. 311)

The "literate environment" curriculum will attempt to do this with whole class activities that everyone can respond to in his own way (dramatizations and artwork are prime examples), as well as by offering choice. Children are free to choose books that intrigue them during sustained silent reading period. They will be encouraged to print, but the content will be of their own choosing. They will be invited to participate when the teacher is directing phonics lessons, but they can choose not to.

In providing for choice and individual response, the curriculum creates an environment in which the children can direct their own learning to read process - a characteristic, it will be remembered, of the literate environments surrounding the early readers in Durkin's (1966) study.

SYNOPSIS OF "LITERATE ENVIRONMENT" CURRICULUM ACTIVITIES

The three previously discussed areas of research and theory formed the basis, then, for our curriculum design. When implications were pooled from "early reader" studies, linguistic research into the beginning reading process, and cognitive developmental theory about how children learn, what emerged were a set of principles and key experiences. These core principles were then translated into the following blueprint of curricular activites and routines:

- period of time in which children are encouraged to read to themselves and others ("pretend reading" will be encouraged), and to print;
- daily listening to and responding to literature (through dramatizations, discussion, artwork, composing, echo reading, etc.);
- a volunteer lap-reading program, in which parents, community people and upperclassmen will be invited into the classrooms to read to youngsters individually;
- a classroom library system for first graders to take books home every night;
- a daily sustained silent reading period, in which everyone - including the teacher and any other adults in the room - reads a book of his or her choice for a set period of time (an activity designed not only to nurture the habit of reading, but also to present the teacher as a reading model to the children);
- opportunities for children to dictate stories or messages;
- discussion of grapheme-phoneme relationships in response to children's questions about, and interest in, print;
- activities to develop metalinguistic awareness that words are broken into pieces of sound (adapted form Jerome Rosner's program);
- the presentation of Syllabary books (in which pictures represent syllables);

- the opportunity to use phonics workbooks (Dr. Morton Botel's Language Art Phonics workbooks focus on spelling patterns, and involve children in echo reading, "cloze" and sentence-making activities);
- assessment of pupil progress based primarily on teacher observations.

II. METHODOLOGY

The success of this study really hinged on whether the "literate environment" curriculum could be implemented as intended, for without an accurate rendition of the research principles under investigation, all our descriptions of classroom proceedings and children's responses would miss the mark.

Our basic purpose in undertaking the study after all was to answer the question: "What happens when inner city kindergarteners are exposed to a reading readiness approach that attempts to duplicate the kinds of experiences and conditions that appear to exist in the home learning environments of 'early readers'?" To answer that question, the experiences and conditions associated with "early reader" environments would first have to be in operation.

Our first order of business, then, was to select competent teachers who wanted to carry out the curriculum, and to provide them with a thorough enough training program and support system that they would be able to implement it fully.

SELECTION OF THE "LITERATE ENVIRONMENT" TEACHERS

It was July 2, 1980, when we received word that the National Institute of Education would fund this research project. Faced with the fact that teachers could not be observed teaching in their classrooms because it was summer vacation, and that teachers as well as administrators were hard to contact, we adopted the following procedures to locate and select teachers who were competent at their craft, who held positive expectations for the performance of inner city pupils, who were enthusiastic about the "literate environment" approach as it was explained, and who wanted to participate in the study.

1) A number of people - including a group of Philadelphia school principals participating in a doctoral program at the University, several district reading supervisors, and a participant in an Educational Testing Service study of reading in the elementary schools - were contacted and asked to recommend kindergarten teachers they considered competent, and whom they thought might be interested in our project.

These recommendations yielded 17 names.

2) Four-page letters, detailing both the research principles underlying the "literate environment" approach to reading readiness, and the kind of commitment that would be asked of the teachers were sent to those 17; in addition, 5 more letters were handed to members of a class at the University of Pennsylvania to give to teachers they knew and thought might be interested. The letter requested any who were interested to call for an interview appointment.

3) Ten interviews were conducted during the first two weeks of August. The majority of these interviews lasted two hours; one lasted five hours.

In the first part of the interview, the project director (Putnam) asked essentially two open-ended questions: a) "Could you describe what a day in your class might look like?" and b) "What do you think is the reason so many children from inner city schools have reading problems?" Answers to these questions invariably yielded glimpses of the teachers' attitudes towards the children they worked with, their views of how children learn, their thinking about "reading readiness", and the kinds of activities as well as classroom management techniques they favored for kindergarten.

In the second part of the interview, the project director gave an honest assessment of how much and what kinds of change she believed the "literate environment" curriculum would require for that teacher, based on the teacher's description of how her kindergarten class currently operated. Teachers were then invited to ask questions.

The net result of the interviews was the selection of 5 teachers who seemed both willing and able to participate in the study.

TRAINING THE TEACHERS AND EVOLVING THE CURRICULUM

The matter of training the teachers was complicated by the need to evolve program specifics.

To be sure, the "literate environment" approach had been defined conceptually: it was to be based on certain learning principles and experiences which reflected implications from studies of "early readers," from linguistic studies indicating what is difficult about the beginning reading process, and from cognitive developmental theory about how children learn.

But while a vision of curricular principles and experiences was clear at the outset, the day-to-day specifics were not clear. It was not known, for example, what a daily "schedule" might look like in a "literate environment" classroom. Nor was it known how teachers might best orchestrate certain kinds of literacy events. There was a large gap, in other words, between the approach's conceptualization and its actualization.

Furthermore, there were not detailed descriptions of such a program in the literature on reading readiness. Certainly other reading professionals have recommended some of the activities we would use. A lot has been written about language experience approaches, for example; and articles have detailed procedures for implementing sustained silent reading. But no one had written about all the program elements as a whole. There had only been one previous attempt to implement a reading readiness curriculum based on implications from "early reader" studies (Durkin, 1974-75), but the report of that study only outlined major curricular experiences; it did not detail the nuts and bolts of implementation.

Since the teachers in this study were being asked to tread new ground, and to shoulder much of the burden for evolving the curriculum, it is not surprising that the process of actualizing the "literate environment" curriculum proceeded in stages which coincided to a large extent with the stages of teacher training.

1) Evolving a floor plan

In the first stage of teacher training, the five "literate environment" teachers met for an intensive five day course at the

University of Pennsylvania, conducted by project director, Lynne Putnam, during the last week of August, just prior to the opening of school. (The NIE grant paid for the teachers' tuition.) A kind of floor plan emerged from that week's training, although it would be extended and modified greatly in the months to come.

During the first phase of training, the project director explained the various research principles underlying the "literate environment" approach to reading readiness. During the second phase of training, the teachers were asked to translate those research principles into specific classroom activities. To gain a sense of how books might serve as a focal point in the curriculum, for example, teachers spent several hours brainstorming a variety of responding activities that might follow readings of specific children's books. The point of this exercise was not to provide lesson plans for specific books, so much as to model a thinking process the teachers might go through in visualizing possibilities for connecting dramatizations, art projects, and other activities to books they would read to their students.

Other topics of dicussion included what a daily "schedule" might look like; what kinds of books to read to the children; how to solve managerial problems, like getting "lap readers" to volunteer and devising a system for children to take books home daily; and how to phase in the program gradually when school started.

2) Implementing the program

The single most creative period for actualizing the "literate environment" curriculum occurred during the first six weeks of school, when the teachers were struggling to implement the ideas and activities discussed in the August course. Inspiration for modification came from two sources: the children's reactions on the one hand, and the teachers' innovations on the other. The nearly universal eagerness of the children to look at books and "pretend read," for example, had not been anticipated by the researchers. But when it was observed, it led to the institutionalization of a period (usually 20 minutes or more) in which the children would be encouraged to look at books, and discuss or "read" them with friends. Meanwhile, the teachers were busily trying

out different strategies for managing certain activities, like dramatizations, and experimenting with the daily schedule.

This six week period also constituted the most critical stage of teacher training. During this time, which preceded the taking of research notes, the project director visited the classrooms in the capacity of "change agent." Most of her time was spent intervening with teachers to modify teaching tactics. Each visit was followed by a consultation between project director and teacher concerning changes that needed to be made, problems that needed to be solved, and progress that was being made.

These collaborations were important, we believe, because they provided immediate feedback to the teachers on details of their current teaching behaviors, not all of which were apparent to the teachers themselves, and not all of which gibed with the goals of the "literate environment" approach. Also the project director's analysis and recommendations for change served to keep the teachers focussed on the core themes of the curriculum they were innovating.

It was during this period that it became clear that two of the five teachers originally chosen to implement the program were not going to be able to do so, and, indeed, were going to drop out of the study.

This was not totally unanticipated. The researchers were well aware from the outset of the difficulties involved in getting teachers to suddenly institute new and rather broad program changes, as well as of the possibility for unplanned contingencies (like illness) that could affect any research undertaking. Indeed, the rationale for selecting and training five teachers in the first place had been to provide a safeguard against unforeseen problems of this nature. It was hoped that out of the original five who had been chosen, at least two would be able to implement the curriculum fully. Actually that goal was more than fulfilled, since all three teachers who remained in the study were implementing the curriculum as intended after the initial six-week trial period.

3) Fine-tuning the curriculum

The third stage of implementation consisted of fine-tuning basic program components.

Each of the teachers continued to experiment with her own way of accomplishing stated goals. Particularly successful techniques and activities were reported to the other teachers, either by the project director, or by the teachers themselves during their monthly group meetings, or in personal phone calls with one another. In this way, the "best" methods and activities of each teacher tended to surface, to be adopted and adapted by the others. This process of experimenting with new ideas and fine-tuning earlier ones continued throughout the year.

It was not always smooth going, of course. The teachers encountered problems in getting various of the literacy experiences going. These problems were informative, however. Mostly they helped us improve techniques, by learning what worked and what didn't work; and sometimes they gave us information about the children as well.

The central mechanism for helping teachers during this third stage of implementation was to hold monthly teacher meetings, something which encouraged a significant amount of collaboration among teachers, as well as between teachers and researchers.

The meetings were usually held on Saturday mornings, and sometimes after school on a weekday. On two occasions, the teachers were released from their schools to attend an all-day workshop concerning the program.

Teachers listened intently to one another at these meetings, as they described activities that worked well, problems they were having, and signs of children's progress. A spirit of comraderie was quite noticeable among them. Invariably meetings ran overtime, with teachers and researchers having lunch or supper together afterwards to continue talking. In between meetings, they called one another on the phone to discuss ideas.

In addition to these teacher meetings, the research aspect of this project lent a special kind of feedback to the teacher training process: each teacher was given a copy of all field notes taken in her classroom. These included transcripts of directions they gave students, storyreadings, dramatizations, etc. These notes, as well as the researchers' questions about how the children were responding to various

activities, heightened the teachers' awareness both of the strategies they used, and of the reading-related behaviors their children displayed.

Portrait of the Teachers

On the surface, the three teachers who implemented the "literate environment" curriculum may have appeared quite different. Certainly there was a wide divergence among them in terms of teaching experience. At one end of the spectrum was Mrs. W., a veteran teacher of 29 years, who, in her own words, had "tried it all." At the other end of the spectrum was Mrs. R., the parochial school teacher who had taught kindergarten for only one year prior to the study, and had not as yet earned her teacher's certificate. Mrs. B., with 11 years teaching experiences, fell in between.

As it turned out, however, the three teachers proved a very good match, for they held in common certain key traits which were probably pivotal in determining their success with implementing the curriculum.

First, they cared deeply about children.

Mrs. W. not only works all day with children in school, she directs the Sunday school at her church, and runs a summer camp in the Poconos for inner city children. Mrs. B. is the kind of person who carts many of her class play items home with her during Christmas and summer vacations, so they will not be stolen if the school should be vandalized (as it frequently is). Mrs. R. is a mother of seven children, one of whom is deaf; she values her time with her family, yet was concerned about each child in her class, called parents to check on what was happening at home, and cried when one of her kindergarteners moved away.

One reflection of the teachers' caring was their use of positive reinforcement as their main tool for controlling class behavior. All three were warm in their praise of children's efforts, and even when firm, never berated a child. Another reflection was their high expectation for what the children could achieve academically, if only the teaching methods were right.

A second trait which helped the teachers successfully implement the "literate environment" curriculum was their belief in the underlying principles of the approach. Even though they had to make a lot

of changes in their teaching strategies, the program meshed with their own personal beliefs about how children might best learn to read. In particular, they felt that motivating children to want to read was crucial.

Thirdly, all three were quick to implement recommendations from the project director or the other teachers. Hardly a day would elapse before they would make an attempt at implementing some suggestion; they were flexible enough, though, to adapt these suggestions to suit their own personal styles of teaching. Hard workers all, they were sometimes up late at night making new print-related materials for the next day's class.

These teachers were far more than implementers. They were innovators. It was they who brainstormed many of the techniques which ultimately worked the best; and it was they who gave shape to the research principles which lay at the core of the program.

The success of this research project depended in large measure on a productive partnership between project director and teachers, with each feeding ideas to the other. To get through the rough spots required commitment - to the children who would be affected on the one hand, and to the ideas of the program on the other.

The Study Population

There were 30 children in Mrs. B.'s morning class, 23 children in Mrs. W.'s afternoon class, and 28 children in Mrs. R.'s full-day kindergarten.

Of these 81 children in the study, 7 were white and one was Vietnamese (all 8 from Mrs. R.'s class). The remaining 73 children were black.

Since all three kindergartens were located in Title I schools, the likelihood is that many of the children came from low-income families.

DATA COLLECTION

It took each of the "literate environment" teachers approximately six weeks from the start of school to get to the point where she was implementing the curriculum as intended.

Once this gearing up period had been completed, the path was clear to begin the research phase of the study. The first observations were conducted in mid-October for the parochial school kindergarten, and in mid-November for the two public school kindergartens (which had been involved in a three-week teacher strike in September).

Procedures for Classroom Observations

Observations lasted for the full teaching session, which was approximately 5 hours in the case of Mrs. R.'s parochial school kindergarten, and 2½ hours in the case of the two public school kindergartens, which held morning and afternoon half-day sessions. (Only one section of each of those kindergartens was chosen to participate in the study.) All observations were unannounced, so as to avoid the possibility that teachers might prepare something special for the days researchers visited.

Lynne Putnam, the project director, and Carolyn Watkins, a graduate student hired as research assistant for the study, were the two researchers responsible for conducting classroom observations.

On three occasions - for the first, or baseline observation, for a mid-term observation in February/March, and for the final observation in May/June - both researchers worked as a team taking notes on different aspects of classroom activity. The final typed version of notes represented a blending of both perspectives, along with occasional transcriptions of events (like storyreadings, or dramatizations) that lent themselves to tape recording. These three observations represented the most complete classroom portraits to emerge from our field notes.

The remainder of the observations were conducted by a single researcher (primarily Putnam).

The main objective during observations was to document as fully as possible what happened during literacy events. Literacy events can be defined as events in which written material is in some respect integral to the nature of the participants' actions, interactions and

interpretive processes. In the case of our three "literate environment" kindergartens, literacy events included instances where children were looking at books and pretending to read, listening to stories read by the teachers, acting out those stories, playing with letter blocks, printing in any medium (on paper, at the chalkboard, in sand, with clay, at the art easel, etc.), dictating messages or stories to an adult, and so on.

As notes were being taken, a running account was kept of the times at which activities started and stopped. The point of this was to calculate the number of minutes during which literacy events occurred in a given session, and the percentage of total class time this represented. It should be noted that time for literacy events was counted even if only a few children were engaged in some activity having to do with print. Thus, if it were the case that literacy events occurred during 75% of class time, it should not be interpreted as meaning that every child spent 75% of his or her time in print-related activities that day. Indeed, the likelihood was that most children would have spent less time in literacy events than the total percentage indicated.

Documenting the qualitative nature of literacy events proved far more difficult, of course, than documenting the quantitative aspect of how much time was devoted to print-related activities. Even with the concentration on literacy events, there were limitations to what one observer could record. If observations were to be detailed, only one or two children's words and actions could really be followed at a time. Especially in the "literate environment" kindergartens, where children were frequently all engaged in a variety of literacy events of their own choosing, detailed observation of everything was impossible. One of two basic choices existed: either we could chart overall group patterns, and capture vignettes of different children in moments of their various activities; or we could track one child in detail.

A decision was made to do both - to divide observational time between charting patterns of whole class activity and following two case study children from each classroom in more detail.

Case study children were not chosen until late in January. Prior to that time twelve observations were completed focussing on the whole class. After that time, observations were completed focussing on the

whole class. The mid-term and final observations, in which Putnam and Watkins worked as a research team, focussed on both the whole class and on case study children.

When a case study child was the focus of an observation, the object was to detail how that child spent his or her time during a whole class. If a case study child was not engaged in a literacy event, however, and some other children were, then priority shifted to covering the children who were involved in print-related activities.

Contribution of a Case Study Focus

Following a few case study children closely yielded some new perspectives. For one thing, we were reminded that individual children do not attend consistently at all times during all literacy events; periods of concentration alternate with episodes of talking about everyday concerns with friends, with moments of staring into space, and diversionary tactics like dropping pencils, etc. This was a reality we were not particularly aware of when focussing on the whole group, because in that case it was our habit to observe the children most involved in a literacy event - a tactic which tended to leave researchers with the impression that most of the children were involved almost all of the time.

Another thing the case study approach helped us with was to observe in closer detail some of the print related behaviors that appeared to be common in many of the children. One of the behaviors we were interested in studying, for example, was pretend reading, and in order to do that, it was important to note the actual words a child was using. This, of course, took time. Given the limitations on our time, it seemed more informative to tape record several pretend readings over time of a few case study children, rather than randomly tape record isolated pretend readings of a variety of children.

Finally, through the case study children we were able to gain a sense of how children who were at different points on the road to literacy fared in the same curricular environment. In Mrs. R.'s kindergarten, for example, one case study child appeared to have difficulty remembering certain kinds of information, and seemed barely able to recognize the letters in his name, while the other case study child was actually starting to decode by spring. It was interesting

to compare how these children, so different in these levels of expertise with print, participated in the same activities in the same curriculum.

Selection of Case Study Children

In late January, two case study children were selected in each kindergarten to be the subjects of close observation during second semester.

Since we wanted to hold open the option of at some point comparing the "literate environment" approach with the "traditional" approach to reading readiness, we thought it best to match the case student children in both curricular conditions. That was accomplished by choosing children from corresponding "literate environment" and "traditional" approach kindergartens who matched on the basis of the following criteria:

- same sex
- same race
- the same or very similar %ile ranking on the environmental sub-test of the SESAT (a test administered in the beginning of the school year for the purpose of judging Title I eligibility)
- similar birthdate (since most kindergarten teachers would argue that older children have an advantage)
- the same background with respect to preschool experience

In addition to these criteria, teachers were consulted for information regarding the children's classroom behavior and attendance record. Children who were very shy and untalkative in class were eliminated from consideration, as were children with any kind of atypical behavior problem. Also eliminated from consideration were children with poor attendance records.

By the time all these factors were taken into account, there were not many pairs of children who qualified. From the small pool of candidates who did qualify, one female and one male pair were chosen for each classroom in both curricular conditions. An effort was also made

to choose case study children who represented a range of achievement, at least as judged by their standing on the SESAT environmental test, given in the first month they attended kindergarten. The final selection of case study children included two pairs who, on that test, scored in the high range for their class; three who scored in the median range; and one pair who scored in the lowest range. (It should be noted that only one of the six pairs of case study children scored above the 50th %ile on the test, and were, therefore, considered ineligible for Title I assistance).

Appendix E contains a profile of the case study children, including information on their percentile ranking on the environmental portion of the SESAT test, their birthdates, and whether they had preschool experience.

OBSERVATION SCHEDULE

	Date	Researchers	Minutes Observed	Focus	Typewritten Pages
Mrs. R.	10/9/80	Putnam/Watkins	300	whole class	25
	12/16/80	Watkins	229	whole class	14
	1/23/81	Putnam	330	Kyle	23
	1/26/81	Putnam	330	whole class	16
	2/04/81	Watkins	320	Kinzya	18
	2/20/81	Putnam/Watkins	346	whole class Kyle/Kinzya	36
	4/13/81	Watkins	285	Kinzya	17
	4/22/81	Putnam	340	Kyle	27
	5/15/81	Putnam/Watkins	342	whole class Kyle/Kinzya	35
Totals: 9 observations		Putnam: 6 Watkins: 6	2822	Kyle: 4 Kinzya: 4 whole class: 5	211
(note: Putnam also conducted two informal observations on 12/4/80 and 12/17/80)					
Mrs. B.	11/06/80	Putnam/Watkins	150	whole class	21
	12/15/80	Putnam	150	whole class	10
	12/16/80	Putnam	150	whole class	11
	12/19/80	Putnam	150	whole class	8
	1/27/81	Watkins	143	whole class	8
	1/28/81	Putnam	150	Kimberly	10
	1/29/81	Putnam	150	Bruce	7
	3/19/81	Putnam/Watkins	142	whole class Kimberly/Bruce	14
	5/07/81	Putnam	155	Kimberly	19
	6/08/81	Putnam/Watkins	150	whole class Kimberly/Bruce	26
Totals: 10 observations		Putnam: 9 Watkins: 4	1490	Kimberly: 4 Bruce: 3 whole class: 7	134
(note: Putnam also conducted one informal observation on 12/22/80)					

	Date	Researchers	Minutes Observed	Focus	Typewritten Pages
Mrs. W.	11/13/80	Putnam/Watkins	129	whole class	26
	12/08/80	Putnam	70	whole class	4
	12/09/80	Putnam	90	whole class	6
	12/11/80	Putnam	135	whole class	7
	1/14/81	Putnam	85	whole class	10
	1/20/81	Putnam	90	Latashia	8
	1/30/81	Putnam	135	Omar	7
	3/11/81	Putnam/Watkins	180	whole class Latashia/Omar	19
	4/27/81	Putnam	180	Latashia	17
	4/30/81	Watkins	132	Omar	11
	6/10/81	Putnam/Watkins	180	whole class Omar	26
Totals:	11 observations	Putnam: 10 Watkins: 4	1406	Omar: 4 Latashia: 3 whole class: 7	141

(note: Putnam also conducted one informal observation on 1/21/80)

Total Number of Formal Observations in the "Literate Environment" Study: 30

Total Number of Minutes Observed: 5718 (or 95.3 hours)

Total Number of Typewritten Pages of Formal Observations: 486

Summary of Data Bases

The 30 formal observations, covering 5718 minutes of classroom time, and totalling 486 single-space typewritten pages, obviously form the bulk of our data. But other sources were included in our data bank as well. They include the following:

- 33 typewritten pages noting comments and curriculum ideas that surfaced during teachers' meetings;
- 19 pages of notes listing teachers' major comments during phone calls with the project director;
- a diary maintained by Mrs. R. of classroom events and children's progress, as well as a brief log maintained by Mrs. B. for part of the year listing the daily storyreadings and other literacy-related activities that she planned;
- all print papers produced by each class on the day of baseline, mid-term and final observations;
- a file for each child containing samples of his or her print papers produced throughout the year (collected by the teachers);
- recordings of 10 children from Mrs. R.'s room pretend reading Peter Rabbit at the end of the year (these were in addition to the pretend readings that had been taped or recorded during classroom observations);
- notes from telephone interviews with parents of the case study children, during which parents answered questions about the number of books their children owned, how frequently they were read to, and what the children's behaviors were with respect to reading and printing at home;
- notes from lapreaders in Mrs. R.'s room about the kindergarteners' responses during lapreading sessions (lapreaders were parents, community people or upperclassmen from the school).

Limitations

There are three areas of information in which we would have liked to have gathered information, but did not, because of limitations on

our time.

One of these areas is the home literate environment from which the children came. Other than brief telephone interviews with the parents of case study children, we have no knowledge of the kinds of literacy behaviors and experiences which characterized the children in their homes. We do not know whether they owned their own books, whether someone read to them regularly, whether they looked at books and print on their own initiative, whether their growing enthusiasm for books in the "literate environment" curriculum in school had any carry-over at home. Nor do we know whether the children progressed with reading and printing over the summer following the kindergarten year.

Our study, then, is limited to one context: the classroom. Thus we are not in a position to understand the interaction between home and school with respect to the children's emerging print-related behaviors.

The second area in which our data is limited is the documentation of the children's verbal exchanges as they looked at books and printed together. After some months, we came to believe that these social interactions during literacy events contained important clues to the children's thinking about print. We also came to believe the conversations would reveal how the children viewed themselves as readers and writers.

Unfortunately, what was required to capture those conversations fully was a more sophisticated tape recording system than we had at our disposal (our tape recorders picked up too much background noise). Although we attempted towards the spring of the year to focus more of our note-taking efforts on the children's conversations during literacy events, it was very difficult to record them by hand. Thus we are left with relatively little information about what children said to each other as they went about reading and writing.

The final area in which our data is limited concerns testing for various aspects of the children's print-awareness. If more research help had been at our disposal, we would have liked to construct certain tasks to tap into the children's attitudes towards reading, their concept of print, and their precise stage in learning about letters and sounds. At the end of the year, for example, we were considering setting up

interviews with individual children, in which both researcher and child would use puppets to talk about reading. The researcher puppet would pretend to know nothing, and ask the child such questions as "Why should I learn to read?" and "How do you do it? Can you teach me?" When Putnam tested this technique with several children from Mrs. W.'s afternoon class (that was not in the study), it worked well; the children were excited about the puppets and gave interesting answers. We did not have enough time, however, to conduct and transcribe interviews for a whole class (let alone three whole classes). Had we been able to obtain those interviews, though, they would have provided a rich source of data to round out all that was learned from the classroom observations.

The Issue of Researcher Bias

Researcher bias is clearly an issue in this research.

The project director, who conducted the majority of observations in the "literate environment" kindergartens, was both the originator of the curriculum and the change agent in charge of implementation. Quite obviously, she held a substantial emotional investment in perceiving the curriculum as successful.

The research assistant was also strongly invested in the "literate environment" curriculum. In addition to the research time she was paid for by the grant, she was researching another aspect of the project for her own dissertation. She was documenting the change process involved in implementing the curriculum - which led her to attend the August training course and teacher meetings, to visit the classrooms on her own time, and in general to form a close association with the teachers and project director. A former kindergarten teacher herself, she was attracted to the curricular principles involved in the "literate environment" approach, and plans to implement the program when she returns to her native North Carolina.

Given the extent of involvement and commitment which both researchers felt for the "literate environment" curriculum, the question naturally arises as to how objective their classroom observations were.

Our feeling is that the method of data collection itself worked against editorializing. Field notes were not retrospective accounts

jotted down after class was over (which would have maximized opportunities to report the most favorable memories), but rather were running accounts taken as class was in session. Both researchers felt they tried to record as accurately as possible what teachers and students were saying and doing as they were saying and doing it. Furthermore, in the process of typing up field notes, much time was spent transcibing tape recordings of literacy events which were feasible to tape - like storyreadings and dramatizations. Hopefully this lent even more precision, and, therefore, more objectivity to the descriptive account of what occurred in the three "literate environment" kindergartens.

It is probable that other observers might have developed different styles of note-taking, and it is possible that they would have chosen to focus on happenings other than the ones these researchers focussed on. At the same time, there are probably few observers who would have as extensive an understanding of the reading readiness research as the project director, who had devoted a full two years to reviewing that literature. It could be argued that her knowledge of that literature (including its gaps), as well as her understanding of the research principles upon which the "literate environment" curriculum was based, worked to the advantage of the research effort - both in terms of making decisions about the kind of data to gather during classroom observations, and in terms of drawing meaning from the total library of observations.

An effort was made, in any event, to obtain the advice of someone well-versed both in ethnography and reading, who was outside the project. That person was Perry Gilmore, hired by the grant as a consultant for a total of six days during the course of second semester. Based on her study of the extensive file of field notes, and a site visit to one of the "literate environment" classrooms, she advised the researchers to devote more effort to taping childrens' "pretend readings," as well as to recording the conversation that occurred between children as they looked at books and printed together. She also made recommendations concerning note-taking procedures, the process for selecting case study children, and the system for cutting and sorting data preparatory to analysis. Overall, however, it was her opinion that the data being collected was thorough and rich with information concerning the development of literacy behaviors in the kindergarteners under study.

DATA ANALYSIS

A major challenge in this kind of study is to analyze the great quantity of descriptive data that accrues, and to write about it in a way that it becomes meaningful to someone who has not visited the classrooms or read the raw data.

The task, of course, becomes more manageable if the larger body of data can be subdivided into smaller chunks. The first step in doing that was to decide on broad areas of focus.

In reading through the classroom observations, notes from teachers' meetings etc., it became apparent that our data incorporated two basic kinds of information. On the one hand, the workings of the "literate environment" curriculum were described in detail. On the other hand, there was a lot of information pertaining to the children's response to the curriculum.

Each of these areas, it was decided, would become a focus for the cutting and sorting of data.

1) Sorting data relevant to a description of the curriculum

To provide information about the curriculum itself, one complete set of 30 formal classroom observations was cut apart and sorted into categories which corresponded to clearly defined types of literacy events in the "literate environment" curriculum. Into one file folder went all descriptions of booksharing and printing periods - arranged chronologically and by teacher. Into other folders went all descriptions of story-readings, of dramatizations, of sustained silent reading periods, of choice times, of Syllabary lessons, of metalinguistic awareness activities, and of other miscellaneous print-related activities. Into a final folder went all the "left-overs" - i.e. the description of transition, bathroom and snack times. While these were essentially non-academic moments in the classroom routine, it was considered important to examine them to see whether the children remained involved with books or print during periods not specifically designated for these activities.

Although classroom observations provided the bulk of the data, another source of information consisted of comments made by the teachers during a) monthly teacher meetings, and b) phone calls with the project director. These sources were culled for all mention of how the teachers

managed with the curriculum. These comments were then listed chronologically, and categorized according to type of literacy event.

2) Sorting data relevant to how the children responded

Unfortunately, coding and sorting information about the progress of the children in the "literate environment" classrooms was not nearly so straightforward as cutting out and categorizing information about the curriculum. Since descriptions of children's print-related behaviors were sprinkled throughout all sections of the classroom observations, and since these mentionings made sense only if the context in which they occurred was available for study, it was impractical to attempt to cut out these descriptions. Instead, the following steps were taken:

- One complete set of classroom observations was marked to indicate where children's verbal and behavioral response to print had been noted. This included instances where children ran their finger under print as they looked at books, what they said to each other and to the teacher about what they were reading and printing, and how they used such terms as "word," "letter," "syllable," and "read".

  This same set of observations was also marked to indicate the pattern of social interaction among the children: whether children were working alone, interacting with one or more other children, or with the teacher, a researcher, or another adult. At the time it was thought this might prove helpful, since one of the unusual characteristics the researchers had noted about the "literate environment" kindergartens was the extent of collaborating that went on among the children.

- A file was developed for each case study child. It contained one copy of the observations which specifically focussed on that child, mentionings of the child from other observations, comments from parents, comments from teachers, pretend readings and print products. The purpose of collecting all of this in one file was to facilitate an overall view of the progress and behavior throughout the year of a few individual children.

- All the children's pretend readings were collected in one file.
- In another file was a collection of all print artifacts produced by each of the classes on the days when baseline, midterm, and final observations had been conducted.
- A folder for each child in the "literate environment" study was maintained in which an assortment of that child's print products from the year were filed (the teachers had been in charge of this collection). Each folder was sorted through, and only the most interesting print artifacts were kept. These were arranged in chronological order, and then examined by month for evidence of the sequence in which new printing behaviors emerged.
- Notes from teachers' meetings, and phone calls with the project director were examined and coded for all mention of the children's literacy-related responses and progress. One set of those notes was cut apart and all such mentionings were grouped together and arranged chronologically under the following categories: response to books, printing behaviors, knowledge of letter names and sounds, response to books, printing behaviors, knowledge of letter names and sounds, response to dramatizations, evidence of metalinguistic awareness, response to the Syllabary program, and response to the Phonics workbooks. In addition, there was a category which consisted of all the comments made by Mrs. B. and Mrs. W. (who had taught 11 years and 30 years respectively) about differences in the literacy-related responses of their "literate environment" kindergarteners, compared to the literacy-related responses of kindergarteners they had taught in previous years, when they were using different approaches to reading readiness.

The process of coding, cutting and sorting data occupied the latter part of June and the early part of July. Frank Chrisco, a graduate student, was hired by the grant for 77 hours to do much of this work (he coded and sorted observations of the "traditional" approach kindergartens, as well as of the "literate environment" kindergartens). Carolyn Watkins, the research assistant, coded and cut notes from teachers' meeting and phone calls. The project director rearranged these notes in the

appropriate categories, and sorted through all print products.

When this preliminary phase of the analysis was completed, there began the long process of studying all the data collected in the various categories which had been established, and trying to make sense of it all.

A Comment About The Written Analysis

Our analysis of the "literate environment" curriculum will be presented in the next two chapters. First comes a description of the curriculum, focussing on the various kinds of literacy events which comprised it. That is followed by an examination of the children's literacy-related responses to the curriculum - in particular their pretend readings, their writings, their development of print awareness, and their attitudes about reading and writing.

Any part of the curriculum and any one the children's responses could provide enough material for a study in itself. What we are trying to do, however, is to analyze the entire sweep of what happened in the three kindergartens under observation.

There is both a compromise to be made and an advantage to be gained from presenting an overview. The compromise is that not all areas can be explored as fully as they might if they were the sole focus of a study. The advantage is that each area can be examined in context of everything else that happens in the classroom.

If there were a body of data existing about the development of different areas of children's print awareness in response to different kinds of reading readiness curricula, then perhaps it would make more sense to concentrate on just one or two aspects of what we have studied - just the children's pretend readings, for example, or just their print behaviors.

But the state of the art with respect to reading readiness research is such that very little data exists in the realms we were exploring.

By far the lion's share of research energy to date has gone, on the one hand, towards establishing which pre-decoding skills and competencies correlate most closely with beginning reading achievement, and, on the other hand, towards testing methods which typically consist of pieces of a sub-skill oriented curriculum, and which are assessed

almost solely by student performance on pre- and post-test measures.

This is the first study in which researchers have gone into the classroom to gather naturalistic observations both of how a reading readiness curriculum operates and how the children respond. It is only the second study to implement a reading readiness curriculum modelled after the process "early readers" go through (the first having been reported by Delores Durkin, 1974-75).

The only previous piece of research in which the development of 5-year-olds' print behaviors was observed in a natural classroom setting was conducted in New Zealand by Marie Clay (1975).

Clay (1966) was also the only researcher to date to use classroom observations to document growth of children's print-related concepts during their first year of schooling. Although a good many other studies have focussed attention on kindergarteners' or first graders' concept of 'word', 'letter' and 'sound', as well as on their views of what reading is, all of these studies have relied on interviews and tests, rather than classroom observations, for their data base (Reid, 1966; Denny and Weintraub, 1966; Mason, 1967; Meltzer and Herse, 1969; Downing, 1970; Holden and MacGinitie, 1972; Kingston, Weaver and Figa, 1972; Downing and Oliver, 1973-74; Ehri, 1975; Downing, Ollila and Oliver, 1975; Evans, 1975; Berthoud-Papandropoulou, 1978).

As for an examination of pretend readings, some case studies of preschoolers' progress towards literacy have noted the phenomenon in passing, but have not documented the content of the 'reading' (Bissex, 1979; Rhodes, 1979; Crago, 1975). The only research we know of in which pretend readings were recorded and analyzed was conducted by David Doake of Nova Scotia, who presented an unpublished paper on his work at the 1979 I.R.A. Convention. His investigation focussed on preschoolers in their home settings, however. As yet, there is no classroom study of pretend readings produced by kindergarteners. Lomax (1977), in a study of how 3 and 4-year-olds used the book area in a Scottish nursery school, noted that the children were in the habit of 'pretend reading' to one another; but she did not elaborate further.

The absence of classroom studies which document kindergarteners' pretend readings and spontaneous writings is hardly surprising, of

course. One does not study what does not exist - and judging from the literature on reading readiness, programs which encourage and give status to "pretend readings" do not exist; nor is spontaneous printing generally encouraged as a reading readiness activity.

It is because of the absence of observational data on these kinds of behaviors, as they exist naturally in the classroom, that we have chosen to undertake a study as broad in scope as this one. Hopefully, our research will serve the purpose of opening up new territory, which later studies will map out in greater detail.

III. DESCRIPTION OF THE "LITERATE ENVIRONMENT" APPROACH TO READING READINESS

The focus of this chapter is on the workings of the "literate environment" approach to reading readiness. What did it look like in actual operation? What kinds of literacy events characterized the approach? How did the teachers orchestrate those events? What form did the children's participation take? How did the teacher interact with the children? How did the children interact with each other?

Short of actually visiting these classrooms, or viewing a videotape of the program in action, perhaps the best way to gain a sense of what went on in the "literate environment" curriculum is to read the original observations. We will round out our description of the various types of literacy events which characterize the curriculum, therefore, with as many excerpts from field notes as seems feasible to illustrate the points we are making.

It should be noted that although our observations documented most of the problems and modifications that occurred during the process of evolving the specifics of the curriculum, we do not feel that reporting these is as pertinent to the purpose of our study as reporting how the curriculum looked when it was functioning as intended. For that reason, the excerpts that will be selected will, for the most part, illustrate the "better" moments we observed - when what was happening in class reflected our basic conceptualization of how the curriculum should work.

"TIME ON THE LINE" WITH LITERACY-RELATED ACTIVITIES

Most of this chapter will address the qualitative issue of <u>how</u> time was spent during literacy events in the "literate environment" kindergartens. Before delving into that account, however, it might be interesting to consider the quantitative issue of how <u>much</u> time was relegated to literacy-related activities.

Several lines of evidence point to the simple proposition that the more time children spend reading and writing, the better they get at it. Certainly correlational studies have found statistically significant

relationships between amount of instructional time on the one hand, and achievement scores on the other. In addition, a growing body of descriptive data about successful inner city schools, where low-income minority group children are reading on grade level, indicate that one of the key characteristics of those schools is the commitment of greater than average chunks of time to reading instruction (Weber, 1971).

Even more relevant for our study, however, are the case study descriptions of "early readers." These youngsters apparently spend many hours with books. Not only does this include the hours that parents and others spend reading aloud to them, it also includes long stretches of time in which these children are alone with books - initially looking at pictures and pretend reading, later making efforts to master the decoding process. Similar stretches of time can be spent on printing as well.

Since the larger purpose of this study was to duplicate the process "early readers" go through as closely as possible within the parameters of a kindergarten program, one of our goals was to have children put in a lot of time with reading and writing. Thus we were committed to orchestrating kindergarten sessions in such a way that literacy-related activities were threaded throughout much of the day.

Blocks of time were set aside each day for children to look at books and print. Teachers often read two or more stories to the children each session, and often there was some kind of follow-up activity to one of the stories: perhaps a whole group dramatization, or an art project that children could elect to work on during choice time. Choice time, when children were free to choose among a variety of activities and centers, nearly always included some literacy-related activities as well as the more conventional choices like block building and puzzles.

When the time consumed by these literacy events is tallied, as it is in the "time on the line" summaries on the next few pages, it can be seen that literacy events occurred during the majority of class time in the "literate environment" kindergartens: an average of 66% of the time in Mrs. R.'s class (a whole day session), and an average of 77% and 78% of the time in Mrs. B.'s and Mrs. W.'s classes respectively (both of which were half-day sessions).

"TIME ON THE LINE" WITH LITERACY EVENTS IN THE LITERATE ENVIRONMENT CLASSROOMS

MRS. R.'s CLASS

Date of Observation	Total Time In Class	Time Spent on Literacy Events	%age of Total Time On Literacy Events	Booksharing and Printing Time	Storyreadings	Dramatizations	Literacy Events During Center Time	Other Literacy Events
Oct. 9	300 min.	178 min.	59%	69 min.	24 min.	-	78 min.	7 min.
Dec. 16	229 min.	125 min.	55%	17 min.	45 min.	-	63 min.	-
Jan. 23	330 min.	227 min.	69%	81 min.	31 min.	10 min.	105 min.	-
Jan. 26.	330 min.	194 min.	58%	27 min.	20 min.	23 min.	124 min.	-
Feb. 4	320 min.	188 min.	59%	70 min.	33 min.	-	66 min.	19 min.
Feb. 20	346 min.	231 min.	67%	76 min.	85 min.	28 min.	31 min.	11 min.
April 13	285 min.	218 min.	76%	79 min.	14 min.	18 min.	66 min.	41 min.
April 22	340 min.	263 min.	77%	123 min.	34 min.	22 min.	60 min.	24 min.
May 15	342 min.	236 min.	69%	103 min.	15 min.	-	89 min.	29 min.
Totals:	2822 min.	1860 min.	66%	645 min.	301 min.	101 min.	682 min.	131 min.
Percentage Breakdown of Literacy Events:				35%	16%	5%	37%	7%

MRS. B.'s CLASS

Date of Observation	Total Time In Class	Time Spent on Literacy Events	%age of Total Time On Literacy Events	Booksharing and Printing Time	Storyreadings	Dramatizations	Literacy Events During Center Time	Other Literacy Events	
Nov. 6	150 min.	112 min.	75%	33 min.	24 min.	-	33 min.	22 min.	
Dec. 15	150 min.	120 min.	80%	49 min.	30 min.*	-	34 min.	7 min.	*includes 5 min. film
Dec. 16	150 min.	124 min.	83%	41 min.	20 min.	5 min.	54 min.	4 min.	
Dec. 19	150 min.	129 min.	86%	72 min.	17 min.	5 min.	35 min.	-	
Jan. 27	143 min.	92 min.	64%	63 min.	21 min.	4 min.	-	4 min.	
Jan. 28	150 min.	110 min.	73%	57 min.	24 min.	-	28 min.	1 min.	
Jan. 29	150 min.	119 min.	79%	67 min.	25 min.	-	27 min.	-	
March 19	142 min.	112 min.	79%	54 min.	13 min.	11 min.	21 min.	13 min.	
May 7	155 min.	99 min.	64%	64 min.	18 min.	12 min.	-	5 min.	
June 8	150 min.	129 min.	86%	74 min.	22 min.	-	26 min.	7 min.	
Totals:	1490 min.	1146 min.	77%	574 min.	214 min.	37 min.	258 min.	63 min.	
Percentage Breakdown of Literacy Events:				50%	19%	3%	22.5%	5.5%	

MRS. W.'s CLASS

Date of Observation	Total Time In Class	Time Spent on Literacy Events	%age of Total Time On Literacy Events	Booksharing and Printing Time	Storyreadings	Dramatizations	Literacy Events During Center Time	Other Literacy Events
Nov. 13	129 min.	102 min.	79%	65 min.	20 min.	11 min.	-	6 min.
Dec. 8	70 min.	58 min.	83%	46 min.	5 min.	7 min.	-	-
Dec. 9	90 min.	70 min.	78%	25 min.	-	16 min.	25 min.	4 min.
Dec. 11	135 min.	117 min.	87%	24 min.	10 min.	-	53 min.	30 min.
Jan. 14	85 min.	71 min.	84%	18 min.	15 min.	-	25 min.	13 min.
Jan. 20	90 min.	73 min.	81%	25 min.	18 min.	20 min.	-	10 min.
Jan. 30	135 min.	106 min.	79%	48 min.	-	11 min.	25 min.	22 min.
March 11	180 min.	123 min.	68%	49 min.	29 min.	-	22 min.	23 min.
April 27	180 min.	130 min.	72%	51 min.	18 min.	13 min.	-	48 min.
April 30	132 min.	98 min.	74%	53 min.	-	-	-	45 min.
June 10	180 min.	144 min.	80%	45 min.	28 min.	-	26 min.	45 min.
Totals:	1406 min.	1092 min.	78%	449 min.	143 min.	78 min.	176 min.	246 min.
Percentage Breakdown of Literacy Events:				41%	13%	7%	16%	23%

BOOKSHARING AND PRINTING TIME

One of the most striking characteristics about the process "early readers" appear to go through is that they engage in the holistic acts of reading and printing well before the time they are able to decode. Their first attempts are gross approximations, of course. They "pretend" to read, and they scribble letters in the hope they say something. But as these approximations of reading and writing are repeated over and over again, they become increasingly more sophisticated, and closer to the real thing.

Clearly, if the "literate environment" curriculum were going to pattern itself after the process "early readers" go through, it would have to provide large blocks of time during which children would be encouraged to read and write - and on their own terms. Thus evolved the daily booksharing and printing time - probably the single most important experience in the curriculum.

Actually, the booksharing/printing period emerged in stages. Originally there had not been any plans for such a thing. The idea came from the children, really. It happened on the first visit the researchers made to any of the classrooms: a visit to Mrs. R.'s parochial school kindergarten on September 18th. Putnam later made the following notation about what happened when she and researcher Watkins returned to the classroom after lunch that day:

> As we walked into the room we saw perhaps half the children sitting at their desks, and most of them WERE LOOKING AT BOOKS! They seemed quite absorbed. It was a striking phenomenon, because this was completely their own initiative. No adult had been in the room prior to our coming in.

This sparked the institutionalization of a period (usually 20 minutes or more) in which the children were encouraged to look at books, and discuss or "read" them with friends.

The concept of this period was expanded in December, when Mrs. B. suggested to her children they could print if they wanted to during the initial period they spent looking at books. She put out paper and magic markers for them; and to provide a stimulus which would allow

them to be independent in their printing, she put out a collection of commercially printed rebus cards, with words like "river" printed on them, accompanied by pictures to illustrate the word. The result was an unprecedented burst of printing by every child in the room for 60 minutes.

Again, the researchers learned from the children. The eagerness to print was apparently as deep-rooted as the eagerness to read. After that, printing was incorporated into booksharing period, and this practice was adopted by all three teachers.

What Does It Look Like?

Booksharing and printing time was the first event of the day, lasting anywhere from 20-45 minutes. The routine was for children to get a book to read, or paper to print, as soon as they had hung up their coats.

An observer in one of the "literate environment" classrooms at this time would likely be struck by a sense of purposefulness among the children as they went about their business.

Several children might be heard mumbling as they "pretend read" a story to themselves or a friend. Some children might be printing at the chalkboard. Others might be sitting at desks, drawing or copying words from one of a variety of sources: from words printed on strips of paper by the teacher, from rebus cards with words and pictures on them, from storybooks, from Syllabary books, from word bank cards (each child stored his favorite words in a "word bank"), or from Phonics workbooks. Other children might be in transit, either searching through library shelves for a book to look at, or getting more paper for printing. The visitor would probably note a gentle buzzing sound accompanying the activity as children discussed what they were doing with one another.

The teacher would be moving among the children, writing words for them, observing and commenting on their work, making suggestions, drawing in any children who were uninvolved. An aide or a visiting parent might also be helping. The visitor herself (or himself) would not be in the room long before hearing: "Would you read to me?"

Most of the children would go through periods of working intently and then looking around, talking to a friend, or switching activities. Some children might be uninvolved at any given time, but most of the children would be focussed on reading and printing most of the time during a period.

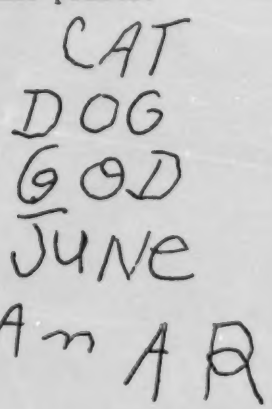
One of the chief impressions an observer would be likely to get is that the children were not only interacting, but were actually collaborating as they read and printed. Some children would be working alone, of course, but many would be reading to or with a friend, discussing pictures in a book with several others, or printing at tables where a small group of children would mix printing with talking and looking at each other's work.

The following excerpt covers the full booksharing and print period in Mrs. B.'s class during the final observation on June 8th. It shows the children involved with books and print in a variety of ways, as well as depicting instances where a child's attention has wandered. Since a case study child - Kimberly - was being followed, one can get an impression both of the group scene and of how one child spends her time.

PRINTING, LOOKING AT BOOKS

8:52 - 9:40

By 8:52, three boys are at the chalkboard. Jamar prints:



Jamar and Ed are standing on a chair, Jamar trying to push Ed off. Jamar calls "Miss B___" three times before erasing the board.

Marletta is looking at A Charlie Brown's Thanksgiving. Shea is walking around reading The Bed Just So.

Mrs. B. reads over a "Boat Trip" notice with four children. (It explains a boat trip that the children will go on in a week or so, and asks parents for money for the trip.) She reads the notice to them, pointing to each word in the print as she does so.

Kimberly picks up Raggedy Andy's book, flips through it quickly and puts it down. She and Yolandra try on each other's shoes.
Yolandra: "I'm six now."
Kimberly: "I know you're six, and that's why you're so big."
Kimberly tells a friend: "We get out of school at 11:30." The friend says no, and Kimberly asks Mrs. B., who tells her they get out at 11:15, explaining where the hands are on the clock at that time.

Mrs. B. starts tearing sheets of computer paper for the children to print on. Kimberly and Yolandra take a piece.

Kadedra stands holding Raggedy Andy as Shea reads Up and Down Book to her.

Alma and Marletta look at the Winnie The Pooh Crossword Puzzles Grades 1-2 Book.

Ed and Ahmed put together alphabet linking letters.

Bruce arrives at 8:58 and joins Jaya, who is tearing computer paper. He takes a sheet and gets a marker.

Jamar is copying words from a Syllabary book.
Four children are on the rug with books.
8:58 - Kimberly puts computer paper on a table and picks out a book. "Stinky book," she says. Then, to Yolandra: "I got the highest chair."
Yolandra and Kimberly talk as they print. Indeed, Yolandra gets very little printing done for the talking. She tells a story about someone at home.
Kimberly: "When did she do it?"
Yolandra: "The day before - because my sister took me out to get some things..."
Kimberly: "You forgot to bring your other toys that you promised me..."

9:05 Group Patterns:

- At one table 7 children are printing (two copying words from a Syllabary book, and two others copying from the Boat Trip notices), and Shea is reading Raggedy Andy's book.
- 3 children are printing at another table
- at a third table 4 boys are grouped around the box with letters; Glendia, Yolandra and Kim are printing; Karen is sitting and staring, but soon gets a book.
- one child is out of the room pretend reading to researcher Watkins
- others are getting paper, talking, in transit, etc.

9:07 - Mrs. B. flicks the lights off. "Thank you. Some people forgot..." (meaning that they forgot to be quiet). They had quieted down

when lights went off, but really hadn't seemed noisy to Putnam beforehand. Mrs. B. asked for milk money and boat trip money. Who had put a dollar bill in her hand and walked away? Then everyone went back to work.

9:10 - Kimberly leaves her table to sit by Mrs. M. (by the piano) and read a Syllabary book to her. She reads "O! O! Corn-o in a sand-wich" etc. easily. Mrs. M. points to the printed words as Kimberly says each one.

Mrs. M.: "Do you know what this word is: n-o?"
Kimberly: "No."
Mrs. M.: "You're so smart."

9:14 - Kimberly runs back to the table where she was previously. Six children are printing there, and one boy is putting together interlocking alphabet letters.

As Kimberly prints she reads what she has printed: "Mona and Stacey and Kim - and" - Yolandra now begins to copy the following words from a strip Mrs. B. has left on the table and which Kimberly has previously copied: "Here is an umbrella."

Kimberly says each letter as she prints "...and daddy."

Putnam asks Kimberly: "Are you copying from anything, or are you writing from your memory?"

Kimberly: "From my memory" (though she doesn't quite pronounce 'memory' correctly) She then tells Putnam: "Every book I got at home I know how to read. I got a book with a lot of stories, and I read it yesterday all by myself."

9:20 - Mrs. B. comes over to their table and reads some of the words the children are printing.

Kimberly: "What do this say?" she asks Mrs. B. holding up a strip with just words on it.

Mrs. B. tells her she bets Kimberly can read it.

Kimberly starts: "Jane saw a -" (and gets stuck on 'zebra.')
Mrs. B.: "What we saw at the zoo."
Yolandra: "Zebra."

Mrs. B. says 'yes,' and suggests to Kimberly: "Instead of Jane you could write -" (pausing for an answer)
Kimberly: "Kim."
Mrs. B.: "You could write 'Kim saw a zebra.' You could write anything you want."

At 9:21, Kimberly announces, "I'm finished." She then volunteers to Putnam: "I can spell detention." Putnam asks her how she spells it, and Kim spells "D-E-N - That's how you spell detention."

Yolandra shows Putnam her paper with print on it. Both she and Kimberly print Putnam's name (which Putnam spells for them at their request).

9:25 - Mrs. M. listens to Karen read a Syllabary book.

Three children are sitting on the rug near the chalkboard looking at books. Karen is pretend reading Wheedle On the Needle. Kamika is looking at A Charlie Brown Thanksgiving; and Vincent is looking at Little Fox Goes To The End Of The World.

9:38 - Kimberly has gotten more computer paper, and is drawing (Yolandra follows her lead). Mrs. B. comes over to Kimberly and tells her that that paper is for printing only and Kimberly knows it. Apparently this mild chastisement bothered Kimberly, because she mentioned it to Yolandra a minute later, implying it was Yolandra's fault.

Mrs. B. announces clean-up time. Some of the children get books in preparation for S.S.R. and begin to look at those; some children show the researchers their print papers before putting them in the collection bin; some children clean up.

A common occurrence during booksharing and printing time, that wasn't really described in the preceding excerpt, was for children to "pretend read" their books. Using illustrations as a cue, as well as any previous knowledge of the story (from having heard it read aloud), the children would fashion their own storyline. They would adopt the somewhat formal cadences of an adult reading a story, and would occasionally insert phrases characteristic of book language - like "once upon a time." (See pp. 125 - 140 for a fuller discussion of pretend readings.)

Although the children often read to themselves, there is sometimes a social aspect to pretend readings, with other children listening and adding a line here and there. The following two excerpts illustrate this kind of interaction.

In the first example, taken from the observation of Mrs. W.'s class on December 11th, Aaron is leafing through a book with lots of pictures of animals. He has not heard anyone read the text before, and so forges his own interpretation from the pictures. Omar is the audience, occasionally interjecting a comment:

Aaron starts at the back of the book and turns the pages towards the front. "The kids are running around while they playing, making a snowman. Turtle sleeping on their shell, and frogs sleep on their legs and porcupines stay curled up." (This last explanation accompanied a picture of the three animals hibernating.)
Omar has come to the table and is listening to Aaron. He interjects a comment: "Squirrels sleep on roof."
Aaron: "Squirrels sleep on the roof? Squirrels sleep in a tree." He continues 'reading': "Grasshoppers hop...Butterflies fly" (at this point he shows the researcher how to hook thumbs and

make fingers wave like wings). "Kids pick flowers. Kids lay down."

Omar: "They relax themselves."

Aaron: "How you know?...When it's cold they go outside and fly their kites...Boys dig...Birds tweet-tweet. The mother goes somewhere and finds food."

Wendell now joins the group and listens to Aaron read.

Aaron continues reading until he gets to the first page. After he reads that page, he says "That's the end. That's the end of the story."

Omar: "Read it again."

The researcher suggests to Aaron that this time he can read from the front of the book to the back.

Aaron looks at the first page and says, "This is the beginning." And he proceeds to 'read'....

This next excerpt was taken from the observation of Mrs. R.'s class on February 20th. It offers a vignette of Heather pretend reading Beauty and the Beast, while Tamara listens.

Heather: "The father was very poor...They picked the things they wanted... Sister got a nice beauty case...And the other sister was getting something new because it was her birthday."

Tamara leaves briefly, then comes back.

Heather, to Tamara: "You're not listening." She then continues with her pretend reading: "Father couldn't buy her what she wanted - her new gown. (When the researcher asks her to repeat what she just said, Heather points to some words in the print section as she reiterates the last sentence "Anybody home? On the table he saw some food."

Tamara: "He said, 'Make a promise to me.'"

Heather acknowledges this comment with an "unh huh" and goes on: "...Her father prayed...She say some eyes, then the eyes went away. She said, 'Child, marry me.'" (The researcher asks her what she just said, and she repeats the words, while pointing with an eraser to printed words in the text.) "She saw her father. Everyone said, 'Hooray, hooray.' He said, 'Come back again.' Then one day she went to the corner and saw the monster dead...And she lived happily ever after - it wasn't her father that time, it was her true husband. And all the trees were happy. And she lived happily ever after."

Heather then turned to Tamara and directed: "Now, this time when I read to you, I want you to write down." (This idea was probably sparked by a researcher taking notes while she pretend read.)

Teacher Management

With respect to the management of booksharing and printing period, we found there were only two basic requirements.

First, there needed to be an adequate supply of materials - which meant a generous library of books that the children found interesting, and an ample supply of paper, along with magic markers and pencils, for them to print with. (If you consider that it was not unusual for a single child to use five sheets of paper for printing during one day, you can imagine how much paper was needed. Mrs. R. and Mrs. B. both were fortunate enough to have some parents who donated used computer print-out sheets to the cause. Mrs. W., who did not have this source available, picked up rolls of paper from an Army surplus center in the city.

Secondly, it was important that the teacher be involved in reading and writing with the children. Her role was to function as a kind of catalyst in the process - giving children feedback on what they were printing, praising their efforts to read and write, spotting children who were off-task and making suggestions to draw them into the activity.

This is not to say that the children were interested in looking at books or printing only because the teacher kept them interested. Most of them were quite able to sustain the activity on their own. This was demonstrated when Mrs. R. had to leave the room on several occasions during the year, and reported that her children didn't even realize she was gone. And once, when Mrs. B. became curious about whether her children would sustain with books if she weren't in the room, she remained in the hall for some minutes observing them. She, too, reported her children didn't notice she was absent.

But for the long run, the direct involvement of the teacher in this period remained important. We learned this when Mrs. W. had difficulty in the beginning of the year getting her children to remain focussed on books. What she was doing during that time, however, was preparing activities for the rest of the day; she was at her desk, instead of with the children. As soon as she began to sit down and read <u>with them</u>, they stayed on-task.

The following excerpt, from a January 27th observation in Mrs. B.'s room, illustrates how a teacher might interact with the children during booksharing and printing time. In this case, she assists the children

with their word banks, comments on what some of them have printed, and draws in a child who was initially uninvolved.

BOOKSHARING AND PRINTING TIME

8:54 - 9:39

Most of the children go immediately from the coat area to get paper and magic markers. Rodney and Reggie go to the library area and look at a book together. Then Rodney comes away and stands at a table watching others print.

9:00 - Jamar is sitting at a table, doing nothing except looking at three other children printing.
Mrs. B. gives Bruce a hug when his mother says he had copied the word "news" from the Daily News at his aunt's house the day before.

9:05 - Mrs. B. hugging and kissing children as they bring up their papers for her to see.

Nakia tells researcher that she knows how to spell "onion" and "snake." She begins: "o - n" and then looks at the rebus cards on the table to finish: "i - o - n." To spell "snake," she looks at her paper where she had written the word "snake" from the rebus cards, and spells it.

9:07 - Jamar is still sitting at the table, with head resting on left elbow; he has not done anything yet.

Mrs. M., the aide, is standing near Mrs. B. when Nikki shows her paper to the teacher. Mrs. M. says, "That paper is so beautiful - that needs a flower sticker." She then reads the words Nikki has copied: "party," "light," "kettle," "pencil," and "kite."

9:11 - Mrs. B. says to Jamar, who is still sitting in the same chair where he has been since his arrival, "Hey, Jamar, are you going to write your word bank words today?" She tries to interest him in doing some activity, but he does not appear to respond. Mrs. B. then says, "Did you get up on the tired side of bed today?" After she has gone to another table, Jamar goes over and gets his word bank, some paper and a magic marker. He sits at the table where Mrs. B. is helping children with their word bank cards.

9:14 - As Mrs. B. works with Bruce, she explains the difference between 'b' and 'd', and then prints 'Dd' in the palm of his hand.

Reggie asks Mrs. B. to write the word "knot" for his word bank.
Mrs. B.: "The one that you can tie, or the one that says you can 'not'?"
Reggie chooses "knot" and Mrs. B. empahsizes the sounds as she prints the word for him.

9:16 - Four children are at the chalkboard. Kamika prints the word "Mom"; when the researcher asks if she knows what the word says, she does. Sandy prints her name, using a 'b' instead of a 'd'.

Shea asks Mrs. B.: "Do you know how to spell 'home'?"
Mrs. B. then sounds out the beginning letter and emphasizes the others; she also explains about silent 'e'. She is then asked to identify other words in her bank, some of which she has printed herself: "Shea," "I," "dog," "little", and "and." When she does not know "dad," Mrs. B. helps her by sounding out the word.

Mrs. B. assists Bruce in writing "king" for his word bank.
Mrs. M., the aide, is also helping children with word bank cards.

Jamar, sitting across the table from Mrs. B., pushes his word bank over to her. Just then Joseph comes up to Mrs. B.: "Look at how many paper I made you."
Mrs. B.: "Do you know how happy you make me, not only in school but at home, too....My name, I see my name."
She then turns to Jamar: "Thank you for waiting so patiently."

Jamar asks for the word "Raiders" to go along with "Dallas" and "Eagles" words already in his word bank. Mrs. B. explains why the capital R was used - because it was the name of a team. She then explains when little 'r' is used.

9:33 - Grouping Patterns:

- 2 children printing at the chalkboard
- 2 children looking at books
- 8 children printing at tables
- 5 children using magnetic alphabet letters and board
- Mrs. B. works with 5 children on word bank cards
- 4 children come in from the hall

9:36 - Children getting louder and becoming unfocussed.

Jamar is beginning to print. He brings up a paper on which he had printed "yes" and "no." Mrs. B. suggests that he add them to the word bank after he tells her what the words say.

Mrs. B. announces to the class that it is time to clean up.

This excerpt brings to mind several characteristics of the teaching approach in the "literate environment" curriculum. For one thing, much of the teaching that is done with respect to letters and sounds is done extemporaneously. That is to say, the information teachers give children about print is in response to what the children are working on, as well as to their comments and questions. While this approach is very much in keeping with the manner in which "early readers" learn about print, it is very different from a traditional, or basal program approach to reading readiness, where certain skills would be addressed according to a predetermined schedule.

Another important aspect of the teaching approach is that the kindergarteners' efforts to read and write are consistently reinforced. Even if the efforts are clumsy, they are praised, because the teachers realize this kind of practice helps the children gain important understandings about print.

When Dr. Botel asked the teachers how they felt about the fact that much of the printing produced by the children looked messy, Mrs. W. responded: "I had to stop myself and ask what was our purpose in having the printing? What we're really aiming for is reading." Mrs. B. added, "That is more important than the formation of the letters per se. The children come to understand that those squiggles can be put together to make words."

The fact that the teachers encouraged their kindergarteners' efforts to read and print did not mean, however, that errors went uncorrected. Corrections were made, but, as Mrs. R. put it, without "belittling the child by saying 'that's wrong.'" Mrs. R.'s style, for example, was to ask a child if the letters he had printed meant anything to him; and if he mididentified a letter, she might say something like: "Would you like that to be a 'g'? It really is a 'p', but here is the way you make a 'g'." Mrs. W.'s habit was equally engaging: she would say "Can I show you a secret about this letter?" Invariably the child would answer "yes." and Mrs. W. would go on to give the proper information in a straightforward manner.

Mrs. R. commented that visiting teachers would ask, "Aren't you afraid of teaching wrong?" She would answer that she wasn't afraid, because all the print models in the room were correct, and because "I never did any wrong teaching." Also, she found that when she corrected children, without forcing it, they eventually chose to print something correctly.

As Mrs. B. observed, "When they're ready, they'll do it. You may say something 20 times, and see no change. But then one day, they'll do it correctly." She gave the example of Kadedra printing her name. For a long time she printed "Kabebra,' even though Mrs. B. corrected her several times. Then, about a month later, she corrected the letter formation.

In closing, it should be noted that the teaching aspects just mentioned - extemporaneous teaching about print, positive reinforcement of children's efforts to read and print, and non-judgmental correction of errors - are critical to the success of booksharing and printing periods, as well as other kinds of literacy events in the "literate environment" curriculum. They establish an atmosphere in which the children are free to initiate the content of print-related activities, at the same time that the teacher guides progress with immediate, individualized feedback. Without this atmosphere, the classroom learning environment would not be the "literate environment" the researchers had conceptualized.

STORYREADINGS

Daily storyreadings tend to be a universal feature of kindergarten programs. There are several respects, however, in which storyreading sessions in the "literate environment" classes probably differed from storyreading sessions in most kindergartens.

1) More than one story was read daily.

Mrs. R. averaged 2½ stories per observation; Mrs. B. averaged 2.7 stories; and Mrs. W. generally read one or two stories to a large group, in addition to reading stories to small groups of children during booksharing time.

Storyreading sessions averaged 33 minutes per observation in Mrs. R.'s class (which ran a full day), 23.8 minutes in Mrs. B.'s class and 14 minutes in Mrs. W.'s class (both of which ran for half-day sessions). (In Mrs. W.'s case, the number of storyreading minutes per session would have been greater if the amount of time spent reading to small groups had been added into the calculations.)

2) The children's favorite stories were reread, sometimes as many as ten times.

In emphasizing repetition of stories, the "literate environment" approach took its cue from the history of "early readers." As Durkin (1966) reported, an important "source of curiosity about the identification of particular words was the experience of being read to. For this purpose stories that were read and reread seemed more influential than those which were read only once or twice." (p. 108)

3) The children tended to take on an active role during storyreadings.

When a story was familiar to them, they might echo read with the teacher (repeat lines after she said them). Or they might fill in well-known speeches, like the wolf's "huff and puff" threat in Little Red

Riding Hood. And sometimes, when the children knew a story by heart, as was the case with Bears In the Night, the teacher might simply hold up the book so they could see the pages, and let them do a group reading.

Perhaps more important, however, was the manner in which children participated in discussions about stories. The atmosphere was such that they, as well as the teachers, were free to ask questions and make comments. Furthermore, both teacher and children tended to listen to what each other was saying.

The free-flowing nature of interchange between teachers and students during storyreading sessions is evident in the following excerpt from Mrs. W.'s first reading of The Boy Who Loved Dirt and Almost Became a Superslob. The entire reading, as it was taped on January 14, lasted for 15 minutes, but we will present only a half of the transcript.

Mrs. W.: "We don't have any slobs in here, do we?"
Children chorus no.
Mrs. W.: "Alright, let's hear about this little boy who loved dirt. Anybody in here love dirt?"
children chorus different responses, something about eating it
Mrs. W.: "I don't think he loved it to eat, though. I really don't think -"
child: "There's dirt sticking on his body."
Mrs. W.: "Well, you know what - the word 'mud' is in this book. I'll show it to you when we get there....alright, ready? The Little Boy Who Loved Dirt and Almost Became a Superslob. Now here we go.
....and now and then Johnathan Jones would roll in the 'mud'.."
children go "ooooh"
Mrs. W.: "'and splattered his food, and never hanged his clothes except on trees'"
child: "Why?"
Mrs. W.: "Because he was sloppy. That's really what a slob is - a child that's sloppy.."
children are commenting among themselves.
Mrs. W.: "We're being very quiet while we read, aren't we? 'liking dirt, especially at bathtime, he dreamed of joining the superslobs.'"
child: "He caught a fish."
Mrs. W.: "Where's a fish?"
child points to picture -
Mrs. W.: "That's not a fish, I don't think. What is that?"
children give various answers, including "octopus"
Mrs. W.: "That's a handprint. Whose handprint is that?"
child: "His."

Mrs. W.: "What's his name?" (not much comment) "Johnathan James. And how did he get his handprint on that tub?"
child: "Cause he was dirty."
Mrs. W.: "What did he have on his hand?"
several children: "Mud."
Mrs. W.: "Dirt, mud on his hand. And he touched the tub. And he got the tub - you can see his fingers. Count them."
children count "One, two, three, four, five."
Mrs. W.: "That's how many you have." She continues with story....'and so he went to where the superslobs lived.' Now here's the word 'mud.'"
children commenting; one says "I said that."
Mrs. W.: "There's the word 'mud.' m - u - d." (points to word in text)
girl: "Is he going to eat dirt?"
Mrs. W.: "Let's see if he does. Let's see if he's going to eat dirt."
child: "I know how to spell 'mud.'"
Mrs. W.: "How do you spell mud? M - so it goes mmmmmud. Begins with an 'm.' Muddd. What does it end with?"
some children make comments (inaudible) about other things.
Mrs. W.: "Listen. Are you listening to this? It's very important. Muddd. What does it end with? Mudddd.
child: "d"
Mrs. W.: "Good! It ends with a 'd'. Good. Very good. Alrighty, look at all these superslobs. Here's one that has a sign written down over here. It says 'Do not disturb.' Why not?"
child: "Cause he's sleeping."
Mrs. W.: "He's sleeping. Right. Alright, let's go on. I love this book. I'm so sorry that someone wrote in that book, Omar. You didn't, did you?
Omar shakes head no.
Mrs. W.: "I didn't think you would do a thing like that. 'They never washed' - uh, oh - 'and never brushed, and never bathed, and smelled.'"
children comment (inaudible)
Mrs. W.: "And they ate dirt."
children: "Ooooh"
Mrs. W.: "You were right. They ate dirt. I didn't think they were going to eat the dirt, but they ate it, too. That's really being a slob, isn't it? - You know what that says, in front of that bowl? They've - they - they - that word starts with an 'm', so what is that word?"
children: "Mud."
Mrs. W.: "That says 'mud,' and this word here starts with a 'p' - and what do little children when they're outside playing with mud - what do they make out of mud? Mud - what?"
children give two different responses (inaudible)
Mrs. W.: "Something else besides..."
child: "Mudpies."
Mrs. W.: "That's it. That's what that word says."
child: "Mudpies."
Mrs. W.: "That's exactly what it says. Mudpies. See it? It starts with a 'p'.
child: "That's what they're making."

Mrs. W.: "That is what they're making. They make mudpies and they're going to eat them."
children all chorus "Oooooh"
child: "What they eat?"
Mrs. W.: "This says - here's something else. This says 'a dirty picture.'"
children: "Oooh" Some are laughing.
child: "Here he is now."
Mrs. W.: "Here he is. He has on that towel."
children laugh
Mrs. W.: "Because you see - he was in the tub when he started thinking about joining them. He started thinking about going there.
child asks to go to the bathroom.
Mrs. W. to that child: "Knock on the door and wait til he comes out. Alright - 'You'll like it here, Johnathan James; they said. 'You are quite the dirtiest little boy we've ever seen.' (turns page) Oh, and here's superslob hall. And this says 'Welcome Johnathan James. Why does he have that towel on?" (She points to illustration)
Marlon: "Because he like to be a superhero."
Mrs. W.: "Superheros wear - what's he making pretend it is?"
child: "A hero."
Mrs. W.: "He's making pretend it's a cape, isn't he? Well, it keeps him from catching cold, too, since he doesn't have any clothes."
some children laugh; some go "Ooooh"
child asks why he doesn't have any clothes
Mrs. W.: "Well, cause he was in the tub. 'So he stayed, although sometimes' - listen to this (children were still making noises) - 'sometimes he thought about this mother' - aw, I wonder why he thought about his mother?"
child: "Because she was a human being."
Mrs. W.: "ooh -why?"
boy: "Cause she was his mother." another: "He got mud." others go "ooooh"
Mrs. W.: "Listen to this. 'He rolled in the mud.' There's that word again. How do you spell it?"
children: "m" (pause)
Mrs. W.: "M - u -" (pauses)
child: "d"
Mrs. W.: "d. M-u-d...mud. 'And he splattered his food, and he stuck weeds in his ears'"-
children: "Oooooh"
Mrs. W.: "'and was terribly rude.' What's that?"
child: "Rude?"
Mrs. W.: "Rude."
child: "Rude is mud."
Mrs. W.: "Rude. He was rude."
child: "He was rude and dirty."
Mrs. W.: "That meant he was sassy. And he didn't say thank you and please."
.....

The Questions Teachers Asked

Like most teachers, the teachers in the "literate environment" approach asked questions about the stories they read to their classes.

They differed in the extent to which they did so, however. Mrs. B. and Mrs. R. both averaged about 3 questions a storyreading, but Mrs. W. averaged nearly 11.

Two points should be made about the role of question-asking during storyreading time. First, when questions were asked, it was not so much in the spirit of "quizzing" students as it was in the spirit of generating a discussion about the story. Secondly, although questions were considered one way of nurturing reading comprehension, they were not the only way. Follow-up activities, especially dramatizations, were considered just as important, if not more important (both will be discussed in later sections).

Given the possibility that teacher questions could influence children to think in certain ways about what they read, it seems important to examine the focus of those questions.

For the purpose of analysis, a list was made of all questions recorded during storyreadings. Each question was categorized according to its focus, and the percentage of total questions each category represented was calculated for each teacher (see the chart on p. 64).

The precision of this analysis is limited both because the researchers may not have recorded every question asked by teachers during observed storyreadings, and because distinctions between question categories were sometimes blurred. The analysis was useful, however, for it indicated where teachers were focussing their attention.

Twelve different types of questions surfaced in all, although not all types were used by all the teachers. Indeed, each teacher posed questions from only nine categories.

One of the most important patterns revealed by the distribution of questions had to do with the relative weight accorded factual recall questions.

"Who, what, when and where" questions normally comprise the lion 's share of "reading comprehension" questions posed in basal reading series. Presumably, most classroom teachers follow this pattern as well. Not so

for the "literate environment" teachers. Only 15% of Mrs. R.'s questions fell into this category. As for Mrs. B. and Mrs. W., both placed more emphasis on factual recall questions than on any other single category - 33% and 35.5% respectively; however, this was still less than ordinarily might be expected. Compare these percentages, for example, to the 61% emphasis placed on factual recall questions by all three teachers in our "traditional" approach study (see Part Two of this report).

Overall, then, two-thirds of Mrs. B.'s and Mrs. W.'s questions, and 85% of Mrs. R.'s questions fell outside the purview of factual recall questions.

The following is a list of the other kinds of questions that were asked, starting with the ones which were used most often.

Personal Response Questions....

All three teachers asked questions which linked the children's personal feelings and experiences to those of characters in the books they were reading. Mrs. R. used this type of question the most, however - a full 34% of the time. When reading the part in The Runaway Giant where the squirrel is dreaming, for example, she stopped to ask, "Does anyone here dream? Maybe you can tell me some of your dreams." (1/23) During the reading of Snow White (2/20), at the point when Snow White is running through the forest, she asked "Would you be scared?" Usually this kind of question provoked answers from more than one child.

Print-Related Questions....

Mrs. R. did not ask questions in this category, but Mrs. W. and Mrs. B. did. They frequently slipped in mention of letter sounds. When Mrs. W. was reading the story about the goose who laid the golden egg (12/11), for example, she pointed to the word "farmer" in the text, and said: "Here's 'farmer.' 'Fffff' - what letter?" After a child answered "f", she printed the word "farmer" on the board. Underlining the 'f' and the 'r', she added "Here's the beginning of the word and here's the end of the word."
Hardly a story went by where Mrs. W. didn't point out words in the text to the children. As for Mrs. B., she often stopped to write a word on the chalkboard, sounding out the letters as she wrote. Both teachers' questions about print, then, occurred in a context in which they were frequently pointing out words and remarking about their sounds during a storyreading. The questions were simply an extension of this focus.

Word Definitions....

Occasionally all three teachers questioned the children about the meaning of a word in the story. Usually these questions focussed on words like "despicable" or "rude", that the children were not likely to know. If the children were unable to answer correctly, the teachers would supply the accurate word meaning.

Background Knowledge Questions....

Sometimes the teachers asked about things that were not explained in a story, but which tapped the children's background knowledge. When Mrs. B. was reading a story that mentioned a cuckoo clook, for example, she asked "How do you know what time it is from a cuckoo clock?"

Inference Questions....

Inference questions, which are generally considered "higher level" questions, were used the most by Mrs. W. - 11.5% of the time - but seldom by the other teachers. These tend to be the "why" questions. "I wonder why he thought about his mother?" asked Mrs. W. during one storyreading, probing for an analysis of how the main character was feeling. In retrospect, the project director feels this kind of question should be used far more frequently.

Predicting Questions....

Sometimes a teacher would ask what the children thought would happen next. At other times she might ask the children to predict what word came next. When Mrs. W. was reading The Bear Scouts, for example, she stopped several times at the end of a verse to let the children predict the last rhyming word. "'And presto chango, abba kazoo - that's how I make my favorite' - what?" The answer was "stew."
It should be noted that only instances where teachers specifically asked children to fill in the next word were counted as questions. There were many, many other instances where teachers would merely pause at the end of a phrase or sentence, and the children would automatically chorus the next word: these were not counted, however.

Focus on Metalinguistics....

Mrs. B. was the only one to use storyreading time to slip in practice on metalinguistics. During a reading of See No Evil, Hear No Evil, Smell No Evil (6/8), for example, she stopped several times to ask "How many syllables?" in a given word. And when she came to the word "clubhouse", she played the game of focussing on a syllable within a larger word: "Do you hear the word 'club' in 'clubhouse'?" "Do you hear the word 'house' in 'clubhouse'?" (see pp. 94 - 97 for a discussion of

metalinguistic awareness activities used in this program.)

Request for Sound Effects....

Mrs. R. was the only teacher observed calling for sound effects during a storyreading. In reading The Three Musicians of Bremen (4/22), she asked "What's the sound of a snake?" "What was the sound that the rooster made?" "How did the dog go?" With each question, the children responded by making the appropriate animal sound.

Reference to Other Books....

Mrs. R. was also the only teacher to ask questions which made reference to characters and incidents in other stories the children were familiar with. When reading The Rat's Christmas (12/16), for example, she stopped at the point where the rat looks in a mirror. "Someone else used to look in the mirror, didn't they? And they used to say, 'mirror, mirror on the wall, who's the fairest of them all?' What story is that from?"

Follow-Up to Children's Questions....

Mrs. W. was the only teacher observed responding to a child's question or comment with a question of her own that was related to what the child had said. During a reading of the story about superslobs, for example, one child commented "He caught a fish." "Where's a fish?" asked Mrs. W. When the boy pointed to an illustration of something other than a fish, Mrs. W. asked a series of questions to elicit what it was (a dirty handprint of the main character).

Questions that Call for Action....

All three teachers on occasion would ask questions that led to the children acting out something. For example, during the reading of A Rat's Christmas (12/16), Mrs. R. asked "How did he walk?" and the children responded by stomping their feet on the rug.

Types Of Questions Teachers Asked During Storyreadings

	Total Number of Questions Recorded*	Factual Recall	Personal Response	Print-Related	Word Definitions	Background Knowledge	Inferences	Predicting	Metalinguistics	Request for Sound Effects	Reference to Other Books	Follow-Up to Child's Comment	Calls for Action
Mrs. R.	41 for 12 stories	15%	34%	-	12%	7%	2.5%	5%	-	12%	10%	-	2.5%
Mrs. B.	33 for 10 stories	33%	6%	12%	9%	9%	3%	9%	15%	-	-	-	3%
Mrs. W.	96 for 9 stories	35.5%	9%	20%	7%	2%	11.5%	5%	-	-	-	7%	2%

* note: Only the stories read by the teachers themselves were examined for type of questions asked, not the stories read by aides. Only main questions were counted, not auxiliary questions designed to lead children to "right" answers. Rhetorical questions were excluded.

Follow-Up Activities

Storyreadings did not end with the reading and discussion of a story. In order to help children "digest" a story, other activities followed.

Sometimes those activities took the form of dramatizations (which will be discussed in the next section). Sometimes they took the form of an art project, or a science project. Sometimes they involved the use of print.

Most of these activities would have been enjoyable in any event, but the fact that they were connected to story themes invested them with greater meaning; and the activities, in turn, invested the stories with greater meaning. In other words, the interplay between stories and follow-up activities worked both ways: each reinforced the other.

In previous years, the three "literate environment" teachers had been accustomed to thinking of storyreadings as complete activities in themselves, separate from other activities. Thus it was new for them to think in terms of relating activities to books.

It didn't take long for them to internalize the concept, though. Indeed, thinking in terms of follow-up activities became a kind of reflex response when reading a story. As Mrs. W. commented, when she read Old Hat, New Hat to her children in January: "All these years I've been reading it, and I just read it. That's all I did. Now I see these wonderful things to do with it."

It seemed to the researchers that the teachers really enjoyed the creativity of brainstorming follow-up activities to stories, and that they took great pride in reporting their best ideas to one another.

The following list offers a synopsis of some of those ideas.

Art Projects

- After reading Billy Goats Gruff, Mrs. R.'s children made paper bag puppets of the billy goats and the troll.
- After reading a Frog and Toad story about "The Lost Button," Mrs. R. gave the children buttons to glue onto "jackets" she had cut out of construction paper.

- After reading The Three Little Pigs and Little Red Riding Hood, Mrs. R. helped her children make wolf masks which they could tie onto their heads. Many of the children wore their masks for the rest of the day, and some re-enacted The Three Little Pigs (at least the wolf's part) during choice time.

- After hearing the story of Robin Hood, Mrs. W.'s children made Robin Hood hats.

- After hearing Peter Pan, they made Captain Hook hats, and some of the children printed "Captain Hook" on their creations.

- After reading The Gingerbread Boy, Mrs. B.'s children not only re-enacted the story, they prepared and baked their own gingerbread people cookies as well.

- After reading a story to her children about a laughing dragon, including a scene in which a child looks at footprints through a magnifying glass, Mrs. R. had the children dip their right foot in purple paint and press it on a piece of paper. She printed "right foot" on the papers, and the children printed their names. According to Mrs. R., the activity was good for stimulating discussion about how the paint felt (squishy), about dragons, magnifying glasses, and other things in the story.

Science-Related Projects

- After reading Three Friends, in which there is mention of "sunken treasure," Mrs. R. filled a basin with water and added a variety of objects - including a log, paper clip, button, penny, magnet, screw, and straw. The children observed the objects and discussed what made them float or sink.
  The basin was then put in the science area for the children to explore during center time.

- Prior to reading Ducks Do Not Get Wet, Mrs. R. asked her children to vote on whether they thought ducks get wet or not.

After reading the story, she conducted an experiment to help the children understand that oil and water don't mix. She asked one child to fill a jar half-full with water; then she asked another child to pour some cooking oil into the jar. The class discussed what happened. Another child was asked to try mixing the oil and water with a pencil; again, the class discussed what happened.
Afterwards, the jar was placed in the science area for the children to look at during choice time.

- After reading Jack and the Beanstalk, Mrs. R.'s class planted beans. In the weeks that followed, the children watched as the bean vines climbed up strings that reached to the ceiling.

Print-Related Activities

- After reading The Little Lamb, Mrs. B. passed around some lamb's wool for the children to touch. Then she asked them what the wool felt like, and printed their descriptions on the board: "soft," "cuddly," "white," "silly," etc.

- After reading a Frog and Toad story called "The Letter," both Mrs. B. and Mrs. R. invited their children to write letters during choice time (an aide helped them with spelling).
In addition, Mrs. B. presented each of her children with a letter, sealed in an envelope, that she had written to them. Each letter was different, but the gist of the message was "I think you're terrific."

- Mrs. W. originated the idea of making a deck of cards to go along with two books the children enjoyed a great deal: Bears In the Night and Old Hat, New Hat. Each laminated card contained an illustration and a key phrase from the book - for example, "between the rocks," along with a picture of rocks, from Bears In the Night. Duplicates of each card were made so the children could play "concentration" with them. These same cards could also be used by the children for a sequencing

activity: retelling the story, using key phrases.

- One of Mrs. W's kindergarteners brought in a story for her to read to the class about a dog who learned 100 words. After reading the book, Mrs. W. told the children that she was turning them into puppies, and that, like the puppy in the story, they were going to learn new words. She asked them to stand up and bark; then she asked them to print the word "bark" after she printed it on the board. Next she asked them to pretend they were begging for food, and then to print the word "beg." She continued on in that manner, first asking them to act out a word that might describe a dog, and then asking them to print the word. She reported that even the children who had difficulty printing, tried hard to print these words.

  (It should be noted that upon hearing of this activity from Mrs. W., Mrs. B. promptly tried it out on her class. "It didn't work well for me, though" she reported. Perhaps this should serve as a reminder that different teachers have different styles; what works for one might not necessarily work for another.)

- The Tale of Peter Rabbit was one of the children's favorite books, and, consequently, was read and re-read many times. The story lent itself quite well to a number of follow-up activities. The favorite one, it seemed, was dramatizing the story. In Mrs. B.'s and Mrs. W.'s classes, this took on the added dimension of the children singing 7 songs about Peter Rabbit at appropriate times during the telling of the story.

  Because her children enjoyed these songs so much, Mrs. B. printed the words to each one on large sheets of language experience paper, and mounted them on one wall of the classroom (verses from all seven nearly covered the entire wall).

  On the day she first printed out one of the songs, a group of children gathered in front of it during choice time and for

about 15 minutes amused themselves by singing it, while one child at a time ran a finger under the print.

Mrs. B.'s children also drew pictures of the part they liked best in the story, and dictated captions for the teacher to print.

The first time some poems from Where the Sidewalk Ends (by Shel Silverstein) were read to the children in Mrs. R.'s room, they responded enthusiastically. Several days later, a visitor was good enough to copy one of the simpler poems - "Lazy Jane" - on a large sheet of language experience paper, which was hung on the wall next to the chalkboard. It read:

Lazy
lazy
lazy
lazy
lazy
lazy Jane, she wants a drink of water so she waits and waits and waits and waits and waits for it to rain

The children found the poem amusing. They also found it easy to read and write, because it was short and repetitive. Children could be seen wandering over to it during odd moments of the day, mumbling the words to themselves or reading them aloud to a friend. They could also be seen copying the words on the chalkboard right next to where the poem hung. Almost every child in the room could recite "Lazy Jane" within a few days' time.

The Children's Response to Storyreadings

"Can I read it?" "Can we play that?" "Can we read it again?" These were all common requests after storyreadings.

When children liked a story, it seemed, they wanted to hear the teacher read it again; they wanted to pretend read it for themselves; they wanted to act it out; they wanted to take the book home. They wanted, in other words, to repeat the story in some way.

Of course, the children enjoyed some stories more than others. According to the teachers, their favorite books, the ones they wanted to hear over and over again, included the following:

classic tales:	Snow White
	Hansel and Gretel
	Rumpelstiltskin
	The Three Little Pigs
	Goldilocks and the Three Bears
	The Gingerbread Man
	The Three Little Kittens
	Peter Rabbit
	Three Billy Goats Gruff
	Where the Wild Things Are
	The Five Chinese Brothers
	Rudolph the Red-Nosed Reindeer
Barenstain Bears books:	Bears In the Night
	Old Hat, New Hat
	The Bear Scouts
other stories:	The Rat's Christmas
	The Boy Who Loved Dirt and Almost Became a Superslob
	There Is A Nightmare In My Closet
	The Goblins'll Get You Ef You Don't Watch Out
humorous poetry:	Where the Sidewalk Ends

Given the emphasis placed on storyreadings, and especially on the repeated readings of favorite stories, the researchers were curious as to whether the children displayed any gains as a result. The following are behaviors which were noted both by teachers and researchers.

One apparent, though minor, repercussion of hearing stories read several times was that the children became familiar with book titles. According to Mrs. B., by mid-November children were recognizing stories

by their covers. "They don't just say 'Will you read this book?' They say, 'Will you read The Birthday Car?' 'Will you read The Little Engine That Could?' They're saying the titles of books as they show them to me." What was significant about this response was that Mrs. B. had not seen it before in 10 years of teaching.

Another apparent repercussion of the concentrated doses of story-reading was an increase in the children's attention span. Most of them, of course, had already been able to listen to stories for 20 minutes at a stretch in the beginning of the year, but that span increased as the year progressed. Mrs. B. used to say she felt her children could listen to stories all morning. Some days she would read one story after another for an hour straight.

Not only were the children increasingly able to listen to several stories in a row, their attention span for single books increased as well. In late February, Mrs. R.'s children were observed listening with interest to a 51-minute reading of a longer than usual version of Snow White (illustrated beautifully by Disney studios). Several weeks later, Mrs. R. reported that she read an entire Mother Goose book to her children from 11:00 - 11:20 one morning, and from 12:45 - 1:20 that afternoon and that even after hearing nursery rhymes for 55 minutes, the children still wanted to spend another 10 minutes reciting rhymes that weren't included in the book. "I wouldn't have thought they would want to spend more time with it," said Mrs. R.

Another result of the children's hearing so many stories read to them during the year was that they became increasingly conditioned to book language. As Mrs. B. phrased it, "their ears" became "tuned to language." She first noticed it in March, in connection with the reading of Hansel and Gretel. "I didn't read the original version at first, because I felt the language would lose them. So I read a simpler version, until they knew the story. After they knew it, after a few weeks, I read the original Hansel and Gretel to see what would happen. It has lines like: 'They'd been sitting for such a long time' and 'eyes shut with fatigue' and 'they fell fast asleep.' A child who had been used to simpler language would have been lost, but I didn't lose anybody."

She told another anecdote to make the point. She had decided, after reading a book about ducks, to teach the song "Six Little Ducks." "You know what the kids said to me? 'That's a baby song' - and I knew why. They felt it was babyish because their ears are tuned, I think, to better language. No class has ever said that to me before."

Again, in April, she commented that "the listening ability" of her class was higher than for any class she had taught previously.

Another area the researchers were interested in was vocabulary development. Although the children clearly became accustomed to hearing more complex book language over the course of the year, the researchers wondered whether they were picking up and using new words they heard in the stories.

It is a question of some interest, because, as Anderson and Freebody (1981) point out, "Measures of vocabulary knowledge are potent predictors of a variety of indices of linguistic ability. The strong relationship between vocabulary and general intelligence is one of the most robust findings in the history of intelligence testing." (p. 77) They add that "an equally consistent finding has been that word knowledge is strongly related to reading comprehension." (p. 78)

This is one area in which some testing may have been useful. As things stood, however, our only source of information came from the observations, and teacher comments.

One anecdote, relayed by Mrs. R., suggested the children were interested in learning new words. After hearing Benjamin Bunny read to them in late March, one of Mrs. R.'s children commented, "There are a lot of words we don't know." Since the class seemed interested in learning about them, they went back over the copy on each page, picked out words that were unknown - words like "tam-o-shanter" and "clogs" - and guessed what they meant.

As for how many new words the children actually absorbed, it seemed that the more times a story was read to them, the more likely they were to remember new vocabulary. T h u s the word "rude" began to crop up in Mrs. W.'s class after she had read the story about superslobs several times. When Peter Rabbit was read a few weeks later, for example, Keith commented that "he was rude" (referring

to Peter's clandestine munching of the vegetables in Mr. McGregor's garden).

Mrs. B. also felt that story repetition was important for vocabulary development. "They almost have to have committed something to memory before getting book language," she commented in May. With Peter Rabbit, for example, it wasn't until the story had been read many times to the children, as well as dramatized, that she began to hear them using words and phrases from the book - including the favorite "getting into mischief."

Another indication the children were absorbing vocabulary terms from storyreadings was that when Mrs. W.'s and Mrs. R.'s kindergarteners played with rebus cards from Old Hat, New Hat, they would use actual phrases from the story - phrases like "frilly hats." This was true even for children like Kyle, who had difficulty remembering names, and who was the least knowledgeable child in his class with respect to print.

DRAMATIZATIONS

Dramatizations were probably the most significant form of follow-up activity to storyreadings. Not only were these re-enactments of stories great fun for the children, they were an important menas of fostering "reading comprehension," because they allowed the children to rehearse and internalize the sequence of events, as well as the language, in a story.

Children of kindergarten age are still very fond of "make-believe," or symbolic play. So it should come as no surprise that the "literate environment" kindergarteners commonly asked to "play" their favorite stories. Moreover, they were often eager to repeat a dramatization - perhaps several times.

Directing a Dramatization

The point of these dramatizations was not to stage a "show," but rather to give each child the opportunity to "play out" the story - to identify with a character and give concrete actions to the storyline. The basic rule-of-thumb for orchestrating these dramatizations, therefore, was that everyone should participate at the same time.

This was accomplished in essentially one of two ways: either the whole class played all parts as the teacher narrated the story (the method preferred by Mrs. B.), or the children divided into groups according to which character they wished to play (the method preferred by Mrs. R. and Mrs. W.).

If the latter way was chosen, then the first step in setting up a dramatization was to have the children choose parts. A teacher might point to a certain place in the room and say, "Everyone who wants to play Snow White, stand over here;" then point to another spot and say, "Everyone who wants to be a dwarf, stand here" -- and so on, until all the roles were filled and each child had made a choice.

Another preliminary step might be to tape signs to characters and set, something Mrs. W. was in the habit of doing. When she was organizing her cast for The Three Little Pigs, for example, Mrs. W. taped the sign of "wolf" on the back of one of the several children who wanted to

be The Big Bad Wolf, the sign of "mother" on the back of the girl playing the pigs' mother, the signs "Little Pig 1," "Little Pig 2," and "Little Pig 3" on the backs of a child from each of the three groups of pigs. The point of this was to tie print directly into a dramatization. It was not expected that the children would actually 'read' the signs, or depend upon them as cues during the dramatization; rather, the idea was for them to see print always connected to important classroom activities. Also, these cardstrips with characters' names could be placed on the print table after a dramatization was over, and later that day children would be likely to copy those characters' names on their print papers.

Once the preliminaries were completed, and the actual dramatization began, the teacher played a number of critical roles: generally she was narrator, stage director, and prompter all in one.

To illustrate how a dramatization might look, we are going to present two excerpts from our field notes. The first is taken from baseline observation in Mrs. W.'s room on November 13th. It shows the class acting out The Bear Scouts, a Berenstain Bears story about a group of young bear scouts who follow their guidebook and fare well, while Papa Bear follows his own advice and gets into trouble.

DRAMATIZATION

1:06 - 1:17

As soon as the story is over, the children clamor to act out the story, using the obstacle course that Mrs. W. has set up in the room. They went through the obstacle course three times on the previous day - Wednesday - and had wanted to do it a fourth time, but Mrs. W. said wait until today.

(The obstacle course consists of a plank on chairs - the "bridge"; then a table that the children crawl under; the "alligators" are to position themselves in the back of the room behind a coat rack island. The children will circle around and finally return to the rug, where the pillows that are lined up represent "canoes."

The bridge has "over" taped to it, and the chair has "under" taped to it.)

As children talk about acting out the story, Mrs. W. says, "Okay, now we'll have to get ourselves organized."

Some children go "Shhh!"

Mrs. W.: "We can't get organized if you're not going to help. Come on up here, so we can get organized, Omarsharif.

Child: "Let's play the Three Little Bears."

Mrs. W.: "Well, why don't we play The Bear Scouts first?"

children's comments can be heard: "The Bear Scouts" / I'm the papa bear" / "I'm the father, too" / "I'm the mama bear" etc.

Mrs. W.: "Wait a minute. Okay. Alright. Now just a minute. I really can't do it until you're ready."

children go "Shhh"

Mrs. W.: "I'm going to ask my alligators - I only have three, which means we can only have three at a time."

Three children put on alligator masks (they have string which ties around the back of the head) and children talk about their parts. (note: Latashia and Angela, who were reading with Mrs. L., now join the others)

Mrs. W. directs the "papa bears" to stand in a group by the chalkboard. "We don't need too many, now. Everybody wants to be papa bear today. Isn't that nice?"

She asks children what they want to be. "If you want to be a fisher, you have to stand over here with me." She tells a girl who says she wants to be mama bear that she can be.

"Come on over here, children. Because we're going to be fishers and ride the canoe. Alright, now, we're getting ready to go. Where's the book?" (she's referring to the "guidebook" which is critical to The Bear Scouts story). "Let's take the guidebook with us."

Several children volunteer to hold it.

Mrs. W.: "And we're ready to go on our camping trip. Ready? Okay, we're going over the bridge. Uh-oh, my sign fell off. Wait a minute. Let me put the sign back. Get in line."

The children get in line, and one by one step up onto the "bridge" and walk across. They jump down and then crawl under table.

Mrs. W.: "Did you wave to mother bear? Wave to mama."

children wave and call out "bye-bye." So does 'mama bear.'

(note: Stephanie and another girl remain seated on the piano bench. They are the only ones who do not participate in this dramatization, but they watch. Stephanie calls out: "We supposed to crawl under there?" Mrs. W. answers, "That's what it says - 'under'.")

Mrs. W. calls to children who are already walking around island in the back where the "alligators" are waiting. "Are you ready? Now listen. We have two ways that we can go. Now what does the guidebook say? The guidebook says -"

child: "Short and long."

Mrs. W.: "Yes. But - the guidebook says - which way?"

children: "Short way."

Mrs. W.: "Well, the guidebook - the guidebook tells us to take the long way. But let me see - everybody's not listening. You won't know which way you're going, and you'll get in trouble." (children quiet down) "Good. The guidebook says for the scouts to take the long way. Now, where's papa bear? Papa bear doesn't pay any attention to us, does he?"

children: "No."

Mrs. W.: "Alright, then - papa bear, you may go the short way if you like, but we're going the long way, cause we know better. Come on, let's go the long way. Papa Bear, you can go that way if you want to."

Mrs. W. leads bear scouts around two coat rack islands - the long way. The papa bears go around one island and meet the three "alligators". They scream and laugh, falling backwards.

Mrs. W. leads them onward in their journey. "Alright, come this way. Now're going past.... now listen carefully. Now we're going past a fierce tiger. You ready? Come on." She tippytoes in mock fear past the turtle's cage, looking at the "tiger." The children follow her in a line, imitating fear as they go by turtle's cage.

Mrs. W. whispers: "Don't make anv noise, because the tiger will get you."

They arrive at the rug, where pillows are lined up. Mrs. W. says to them: "Get on the canoe. Get right on the canoe, and some of us can go fishing now." 8 children sit on the pillows; 6 sit on the "bridge" and pretend to fish.

Mrs. W. to another group: "You go make the stew.....Here's daddy over here making the stew. Let's see where he's going to make it. Over there (pointing). Make the stew - and you sit in the canoe. Put your legs across...oh, we have two canoes. Alright, ready? I'm going to tell you how to row. Are you ready? Ready? Get your oars in your hands. Go forward first. Forward. Forward. Lean forward - like that. Now back. Forward and back. (some children repeat 'forward' and 'back' as they row.)

"Oh, I can smell that stew. Forward - oh, I smell something funny. Forward - ooh, that stew is making me sick."

child: "It's making me sick. I'm going to throw up."

Mrs. W. goes "oh" and child laughs. "Come on over, now. We're going to have a good dinner. Oh, thank goodness you're bringing fish home. Come on over, now. We're going to have a fish dinner. And now - Dad, where's Dad? That stew was terrible. But these fish are gorgeous.

children talk about their "dinner"

Mrs. W.: "Alright, I'm sleeping in a tent, too. And Dad can go over there and sleep in that cave if he wants to. Alright - let's sleep right here."

The papa bears crawl under teacher's desk - the "cave".

Mrs. W.: "Oh, come on out. I see something - bats."

Papa bears come out screaming.

Mrs. W.: "Oh, we have to carry him home. Let's carry him home. Two people carry one person. Carry him home."

Papa bears are lying on rug. Mrs. W. helps children carry them (one at feet end, one holding arms) over to piano area.

(Wendell is a papa bear, and lies on rug going "aaaah")

The children, with Mrs. W.'s help, actually lift and carry the papa bears.

Mrs. W.: "Mama bear - you're not even looking at papa."......

1:17 - "Okay, everybody up now."

The second excerpt we will present from our field notes is part of a rather lengthy, 28-minute dramatization of Snow White which we tape recorded in Mrs. R.'s room during an observation on February 20th. This particular segment begins with the wicked queen ordering the huntsman to take Snow White into the forest and kill her; and it ends when the animals have led her to the dwarves' cottage.

Snow White is a more complex story, of course, than The Bear Scouts, and its dramatization is accordingly more complex. Note the way in which Mrs. R. continually verbalizes the storyline, as well as prompts both the children's speeches and actions.

Tamara, in harsh voice: "I want you to take one - one of my - to go out and put Snow White in the forest and let her stay in there."
Mrs. R.: "Huntsman! Huntsman!"
Tamara: "Huntsman! Huntsman!"
Mrs. R.: "Okay, what do we want?" (in lower, prompter's voice)
Tamara: "Cut out her heart!" (still imitating harsh queen's voice)
Mrs. R.: "When you come back-" (imitating queen)
Tamara: "When you come back-"
Mrs. R.: "With your hear - what do I give it to you in?"
Tamara and Roy: "Jewelry box"
Tamara: "This jewelry box."
Mrs. R., in louder voice, directing huntsmen group: "Okay, now the huntsmen comes - the huntsmen come over, and while they're busy working - right? - she's over there. Huntsmen, can you come with me? I want you to call Snow White, and I want you to tell Snow White that you're going to take her for a walk out in the woods, okay?

The "huntsmen" call "Snow White". They all say some version of "Come for a walk."
Mrs. R.: "Okay, let's go" and she leads huntsmen with Snow Whites around the desks by door. She prompts as she goes. "...and Snow White is happy, isn't she? She doesn't think anybody would ever hurt her, right? So you have happy faces on, and the huntsmen all have - okay, wait here to go over the bridge. Over the bridge, and then we stop."
Mrs. P., the aide, who has been simultaneously prompting the children, now says: "Okay, you have to tell Snow White you cannot really kill her."

The "huntsmen" say this to the Snow Whites.

Mrs. P.: "What else do you tell her to do?"
Maurice: "You can't run from danger(?)"
Mrs. R.: "Can't you stay with me?" (mimicing soft scared voice)
Huntsmen: "No."
Maurice: "Cause we might get killed."
another child: "And we can't go back to the castle."

Mrs. R.: "What do you tell me to do? What should I do?"
Maurice: "Go back - go deep into the forest - run into the forest."
Mrs. R.: "And run into the forest. Okay, here we go." (leading Snow Whites around a group of desks and into the "forest")
child: "And never return to the castle."
Mrs. R.: "And never return to the castle. Here we go. The huntsmen - you go back to the castle with - wait, you have to do something on the way back."

Mrs. P. tells them they have to kill an animal, to get the heart the queen wants.

Mrs. R.: "Oh, and while we're - wait a minute. While we're running, girls, what do we see? Are you okay? What do we see coming from the ground? We think what's happening?"
Cynthia: "The trees are coming up."
Mrs. R.: "The trees are coming up. The roots - and we're plagued. We're crying - oh, huh, huh (crying sound)"
----- Snow Whites cry.
Mrs. R.: "And - how bout the branches? The branches are tryin - come on, girls, you run and I'll be a branch. The branches are trying to - grab the girl." (the girls are giggling) 'You're crying, not laughin. (pause as girls run) Now Snow White falls asleep, and what did the huntsman do because he went back to the castle - I'm sorry"
Mrs. P.: "They already killed the animal, while you were running deep in the woods."
Mrs. R.: "And you took that -" (she is whispering)
Mrs. P.: "The heart."
(there is an interruption as a child comes in the room to give Mrs. R. something)

.....

Mrs. R.: "Okay, now - the queen has the heart. Snow White is in the forest. She fell asleep, and she's so - oh, oh (making whiny sound of some someone who's exhausted)."
------ Snow Whites lie on the rug and pretend to be asleep.
Mrs. R.: "Who comes over to Snow White while she's sleeping?"
Mrs. P.: "Animals - the bird, the rabbit and the deer."
------- The "animals" come over to Snow White. Some of them - including Kyle, flap their arms and make a tweet-tweet sound like birds.
Mrs. R.: "Oh, hello -hello, birds and oh - what a nice deer."
Mrs. P.: "Snow White tells them how good they make her feel."
Mrs. R.: "I feel good."
(The animals and Snow Whites are talking while acting their parts.)
Mrs. R.: "What comes now? You know you have to stay in the woods because the huntsman told you never to run out."
child: "A house - a house."
Mrs. R.: "Tell the animals that you have no place to sleep."
------ Snow Whites say "I don't have a place to sleep" or some similar version. know where this one little house is."
child, who is an animal: "In a circle?"
Mrs. P.: "Yeah."

child makes comment about a "witch" and some other children laugh.

Mrs. R.: "Okay, now, what happens is the animals go, and Snow White follows the animals. But you go around the same way we did to get to the woods." (adopting Snow White's voice now) "Oh, I think I'll follow them. They must be trying to tell me something."

------- The animals lead the way, some still flapping "wings" and making "tweet - tweet" whistling sounds. Snow Whites follow them.

Mrs. P.: "Okay, stop here."

Mrs. R.: "Oh, where are they taking me? Oh, the woods look different here. The forest doesn't look the same. Do the trees look like they're tryin to grab me?"

children: "No."

Mrs. R.: "They look beautiful now - green and pretty. Okay - Snow White - what do we see? We see a - huh (gasping) - a house. Oh, let's go up to the "

------- Snow Whites pretend to approach house and look inside.

The Use of Props

An aspect pertaining to the management of dramatizations was the matter of props. Mrs. W. liked to use props, and was quite clever in constructing them. Mrs. R., on the other hand, preferred not to use props, because she wanted to be free to mount a dramatization on the spur of the moment, should the children request it (which they often did). Thus she asked her class to use their imaginations to picture a scene. Both approaches worked well.

An illustration of this difference in style was the way the two teachers orchestrated the re-enactment of Bears In The Night - a Berenstain Bears story which the children loved, in which a group of young bears left their bed to visit the owls on Spook Hill. The storyline is really a series of prepositional phrases - "Out of bed, to the window, through the window, down the tree, over the wall, around the lake, between the rocks," etc. (Acting out these phrases, incidentally, is a fine way to help children understand the meaning of those prepositions.)

When Mrs. W. prepared for a dramatization of Bears In The Night, she set up an obstacle source: a long strip of corrugated cardboard was taped in the shape of a large window; a clothes tree with a large stuffed paper bag on the top became the "tree;" a table was overturned for the "wall;" two chairs became the "rocks;" and a stepladder repre-

sented "Spook Hill," where the children playing the owls sat on a hobby-horse, calling "Whooooo" to scare their classmates playing the bears. The children took great delight in going over this course, and generally asked to play it a couple time in a row.

Mrs. R., on the other hand, merely threw down large paper strips with phrases from the text printed on it. Her introduction to the children consisted of the following:

> Now on the cards are very special things, very special things. They say exactly what I am going to do. They say exactly what the Bears in the Night did in our book....They did a lot of things: in and out and up and down and around - I thought maybe you would enjoy doing all those different things. So I put cards down that are going to tell us what to do. I don't have anything else but the cards. But I'm going to go through it once, so that you'll know where I am and what the cards say. I'll read the book for you once more before we start, okay?

After having the children echo read the story with her, Mrs. R. then demonstrated where to walk for all the key phrases in the book. As she led the children over the course of printed cards lying on the floor, one of the children "read" the story out loud. The children were not at all bothered by the absence of props; indeed, they asked to repeat the dramatization two more times.

Other Forms of Dramatizations

While Mrs. R. and Mrs. W. tended to hold full-length dramatizations similar to The Bear Scouts and Snow White re-enactments that we excerpted, Mrs. B. tended to use other formats. In particular, she innovated three stylistic variations: mini-dramatizations, pantomimes and dramatization of a science selection.

1) Mini-dramatizations

Mrs. B. had an aversion to wasting time, so when she led her children down the hall to a large playroom for center time, she liked to have them imagine they were some character from a book. Occasionally the walk down the hall was turned into a compressed re-enactment of a story they had just read that day. The following excerpt, taken from our

December 19th field notes, shows a brief, 5-minute dramatization of The Gingerbread Man as the class walks from their main classroom to the playroom down the hall.

The children line up at the door.

10:20 Mrs. B. says, "Let's do the gingerbread man as we go down." Shea starts the narrative off.
Mrs B.: "We can all be narrators....And when he came out of the -" (pause)
children: "oven"
girl: "He ran away"
Mrs. B.: "And he said -
Children chant: "Run, run as fast as you can. You can't catch me, I'm the gingerbread man."
Mrs. B. asks them what animals he encounters as he runs away. "Then what did he see?"
children: "A pig."
...."I ran away from a farmer, an old man....and I can run away from you." Then they chant the "Run, run as fast as you can" part.
Mrs. B.: "I need some help. Where should the river be?"
Children say the fountain.
Mrs. B. points to the printed "Run, run as fast as you can" that she has hanging on the door, and the children say it again, as Mrs. B. runs her finger under the words.

10:23 - they exit into the hall, and stop by the water fountain, where they pretend to hop on the fox's tail, and then his back...
Mrs. B.: "It's getting deeper and deeper, this water - isn't it?" Then she tells the children to listen to Darryl, who "sounds just like a fox."
Darryl: "Get on my head."
girl: "Get on my nose."
Mrs. B. asks them what next, and the children reply that he slips into the fox's mouth. Mrs. B.: "Then we'll just have to slip to the door and pretend that's his mouth." With that, she and the children all run to the door and into the playroom.

10:25 - they enter the playroom.

Mrs. B. later told the researchers that a child had suggested to her that they pretend to be the gingerbread man on the way to the playroom that day. Her comment was, "The kids give you ideas. You don't even need to think of it yourself."

2) Pantomimes

Dramatizations generally integrated verbal lines from a story, as well as actions. But Mrs. B. sometimes had the children pantomime just the actions of characters, as a story was being read. At Christmas-time, for example, as the aide read Twas The Night Before Christmas, Mrs. B. led the children in pantomiming the verses.

On another occasion, when a record of Peter Rabbit was played, the children mimiced the following actions of various characters in the story:

- putting up an umbrella and hopping down the lane (Mrs. Rabbit)
- squeezing under the gate to Mr. McGregor's garden
- munching on Mr. McGregor's vegetables
- holding his stomach and feeling sick
- looking surprised as Mr. McGregor appears

(Peter)

- planting vegetables in the garden
- running after Peter, shaking a rake

(Mr. McGregor)

- moving in small circles, looking for a lost shoe
- slipping out of a jacket when its button is caught in a gooseberry bush
- jumping into a sprinkling can
- sneezing inside the can

(Peter)

- cheeks puffed out, because there is a bean in her mouth (the mouse)
- swishing tail and licking paws (the white cat)
- running home
- lying down to rest

(Peter)

- shaking finger at Peter for getting into mischief (Mrs. Rabbit)
- giving Peter chamomile tea (Mrs. Rabbit)
- eating berries (Flopsy, Mopsy and Cottontail)

3) Dramatization of a science selection

Unfortunately, it was not until the end of the year that we realized dramatizations need not be restricted to the acting out of fictional tales - that, indeed, they would offer a fine means for helping children rehearse the factual content of science or social studies readings.

Mrs. B. was the first to think of it. During the final observation of her class on June 8th, she led her children in a re-enactment of the habits of the sea otter, after having read a selection about the animal from the book, Animals In Danger.

That dramatization was recorded as follows:

After reading about the habits of the sea otter, Mrs. B. says: "Could you be a sea otter and pretend to get the - uh - either the shellfish - how many like shrimp and things like that? - and then swim up to the surface. But first we have to dive down, and then we nave to go to the surface to eat...and then back down again." (Children stand up.) "First you're in the seaweed. Wrap the seaweed around ya. Is the seaweed around ya?" (Mrs. B. makes the motions, modelling for the children, and they follow suit).

children: "Yeah."
Mrs. B.: "Okay, mine is tight - and you have to pretend you're floating, cause the seaweed helps the otter stay on the top of it says. So here I am floating where the water is nice and -"
children: "Cold."
Mrs. B.: "Oh, yea - don't you wish you could stay here all day?"
some children: "Yeah," and they giggle.
Mrs. B.: "Yeah, but I'm gettin hungry, so I'm going down for some cucumber. What are you going to get?"
children give various answers.
Mrs. B.: "Okay, let's go - dive down deep." And she dives down, as do children.
child: "I can't swim. I'm drownin."
Mrs. B.: "Oh, but you're a sea otter. You can swim....Okay, there's my cucumber. Can you eat it under here?"
children: "No."
Mrs. B.: "No - come up to the surface, swim up. Swim up, up. Ummmmm, mine's delicious. How's your lunch?"
one child says something about peanut butter.

Mrs. B.: "I'm going to have scallops.."
children are talking and making eating motions.
Mrs. B.: "I'm going down for one more meal. Ready?" And she pretends to dive.
The children talk as they pretend to dive. Jaya asks Mrs. B. if the otters drink water.

Mrs. B.: "Jaya, I will have to look that up in the Encyclopedia. Okay, we'll have to find out for tomorrow. Let me write that down, because I will forget."

child: "Eat your lunch, eat your lunch."

Mrs. B.: "Jaya said to me she is thirsty as an otter, but I don't know whether it drinks sea water or what it does for drinking. It wasn't in that book, was it? We'll have to find out by looking in a big book about it: an Encyclopedia that tells you about animals. Okay. Ready? Wrap the seaweed, the kelp, around you again and let's float a little bit. We can have one more story and then the playroom. Are you ready? Float. Can you wiggle your toes?"

some children: "No". Children talk as they playact.

Mrs. B.: "Okay, let's turn back into ourselves. A-bra"

children join in on "ca-da-bra."

Mrs. B.: "That was fun."

child: "I like that book."

Having observed this dramatization, the project director would recommend that anyone following the "literate environment" approach include a good many science selections in storyreading sessions, and follow them with brief dramatizations that recapitulate the most important facts.

SUSTAINED SILENT READING (S.S.R.)

The notion of sustained silent reading developed as a way of helping children nurture the habit of reading. Basically the idea is for children, teachers, and anyone else in the classroom to read a book silently, to themselves, for a set period of time - the length of time gradually increasing throughout the year.

Since the "literate environment" curriculum was to be patterned after the process "early readers" went through, and since most "early readers" develop the habit of reading to themselves well before the time they are able to decode fluently, it seemed appropriate to adopt the practice of S.S.R. as a means of nurturing the reading habit in a kindergarten class.

The main difference between S.S.R. and booksharing period is the lack of social interaction. In booksharing and printing period, children pretend read to one another and hold animated conversations about the illustrations in books. In other words, they interact as they look at books.

In S.S.R., however, reading is to be a solitary pursuit. While a social element exists by virtue of the fact that an entire class is engaged in reading, nonetheless each child is supposed to read to himself.

When S.S.R. was first introduced, the children were quite noisy - something the teachers considered inevitable. It took the consistency of having S.S.R. everyday, of seeing the teacher reading intently during this time, and of being reminded that they were not to disturb others, before things quieted down. Perhaps, too, the children's growing familiarity with books which were read in class had something to do with their increasing ability to sustain looking at books quietly. Mrs. B., at least, believed this was an important factor.

In view of the fact that most articles discussing S.S.R recommend that it build up to 5 or so minutes in kindergarten, the two "literate environment" teachers who implemented S.S.R. regularly did quite well. By the end of the school year, Mrs. R.'s class was sustaining for 13 minutes, and Mrs. B.'s class for 25 minutes.

Mrs. W., on the other hand, did not feel that her helf-day schedule allowed her enough time to institute S.S.R., and as a result, she tried it only sporadically during second semester. The periods were short - maybe 5-6 minutes; the children tended to be somewhat noisy, and the focus of many of them wandered from books. What this suggested to the researchers was that for S.S.R. to be successful, it has to be a daily ritual.

The S.S.R. Routine

In Mrs. R.,'s and Mrs. B.'s room, children gathered on the rug, most sitting cross-legged, Indian-fashion. Some lay on their sides or stomachs as they looked at books.

Two basic differences existed between the classes, however, with respect to the rules for S.S.R. In Mrs. B.'s room, the children were allowed to exchange books for new ones during the period, although they were to be as quiet as possible about this. In Mrs. R.'s room, the children were to bring several books with them to the rug, and they were not allowed to get new books once the period started.

Another difference was that in Mrs. B.'s room, children could be heard mumbling pretend readings to themselves during S.S.R., and they sometimes whispered about their books with one another. That was originally how things were in Mrs. R.'s room, until Putnam pointed out, after an observation in late January, that the children were using the period more as a "sharing" time than as a time to look at books by themselves. From then on, silence became the rule. "What's the only noise we're supposed to hear during S.S.R.?" Mrs. R. would ask before the period started. "The sound of pages turning" was the answer. And, indeed, several S.S.R. periods were observed in Mrs. R.'s room where the sound of pages turning was the only sound. To the researchers, the silence seemed profound.

The following description of S.S.R. during the final observation in Mrs. B.'s room in June is fairly typical of how S.S.R. periods looked in her room. Most of the children are intent on their books most of the time, but there is some wandering of attention. Most of the children look at their own books, but some can be observed sharing with others.

Mrs. B.'s class 6/8/81

S.S.R.

9:45 - 10:10

(some vignettes of whole group):

When S.S.R. begins, the visitor (3rd grade teacher from main school) is listening to Glendia read to her; there is more noise than usual. Mrs. B. plays a piano chord again: "I still hear you. Silent means that there's no talking."

The children quiet down immediately. The quiet is broken only by murmurs from pretend readers. Also there is some sound associated with children getting up to exchange books at the bookshelf.

Mrs. B. reads a newspaper, and is sitting on the piano bench. Mrs. M., the aide, and the visitor are reading as well (Putnam had handed the visitor a book.)

Approximately 10 children move their lips as they read. One girl can be heard muttering, "Oh, grandmother."

Jamar looks quickly at My Cash Register Book and puts it away. He gets the Spooky Old Tree and pretend reads to himself, his lips moving: "One with the light and two with the....."

At 9:55 - 5 children are exchanging books. Andrew is looking off into space; he looks sleepy and has book Oops on floor in front of him.

Occasionally a child will disturb another, as Tanya E. does when she talks to Karen.

At 9:58 Mrs. B. leaves the piano bench, moves quietly to a child by the bookshelf and taps head of child. "It's too noisy," she says very quietly and returns to her place, and starts reading the newspaper again.

Glendia reads aloud, while Marlena looks at the book Glendia is holding and listens to Glendia's reading.

Shea's lips are moving as she reads quietly to herself.

Daminga taps Darryl on the shoulder and points to a picture in her book. She makes a face, saying "Ooooh," and he looks. Soon she taps him on the arm again to show him another picture.

Karen and Kamika are looking at the same book for awhile.

Tanya is sitting by the bookshelf, doing nothing. Only one other child is uninvolved with books at this time (around 10:02).

Shawn is reading Bears In the Night; then she grabs the book Andrew is holding.....

10:10 - S.S.R. over

At the same time these notes were taken, the two case study children were being observed closely. One of them, Kimberly, was observed looking at a total of 8 books (exchanging books 7 times). She pretend read three of the books: Jack and the Beanstalk, Bears In The Night, and Where the Wild Things Are. The other books she flipped through quickly, looking only at the pictures. Her attention was not constant, but rather blipped in and out. Every now and then she whispered to a friend. A rough estimate would be that she spent approximately one-half of the 25 minute S.S.R. period actually concentrating on books - either pretend reading or looking at pictures.

It was the impression of one researcher (Putnam) that most of the children in Mrs. B.'s room followed Kimberly's kind of pattern during S.S.R. - focussing on books intermittently, savoring some books more than others, periodically getting up to exchange books, and occasionally engaging in some kind of social interaction with another child.

LAPREADING

Every one of the "early readers" in Durkin's study (1966) were read to regularly, many from the time they were toddlers.

This lapreading experience (so-called, because the child usually sits on a parent's lap, facing the book) appears to be a critical source of stimulation to read, and it probably supplies other advantages as well. Looking at the print during repeated readings of beloved stories may breed familiarity with print - perhaps even leading to the sight recognition of some favorite words in stories. In addition to this, there is the important interchange that occurs between reader and child as comments and questions are contributed by both sides.

There are three aspects of the lapreading experience that cannot be duplicated when the teacher reads to a whole class: 1) the children cannot be looking directly at the print as the story is being read; 2) they cannot hold a private dialogue with the teacher about a story; and 3) they cannot be the center of attention. Without a one-on-one situation, these things are impossible to provide.

For that reason, the "literate environment" program contained a lap-reading component, in which parents, community people and upperclassmen were invited to read to the kindergarteners, one at a time, in a room away from the main classroom (children could sit on laps or not, as they chose).

Unfortunately, only the parochial school kindergarten was swamped lapreaders: not only did they have a faithful corps of community volunteers coming in to read to the children, a group of seventh and eighth graders volunteered as well.

The two public school kindergartens had difficulty drumming up lapreaders. Only a few parents came by to read to Mrs. B.'s children, and in Mrs. W.'s case, only one parent stopped by regularly to read to the children (so instead of taking individual children into other rooms, she would read to a few children at a time in the main classroom).

The notion of lapreading, as it was practiced in the parochial school kindergarten in particular, was highly successful. Not only did the lapreaders read to individual children; the children read to the lap-readers. They also printed together.

The following excerpt (from the baseline observation in Mrs. R.'s room on October 9th) offers a glimpse of a child and his lapreader printing together after they have read some stories. The personalized attention amounts to tutoring.

They go to the blackboard. The lapreader writes her name "Rose." "What does that say?" she asks. Maurice spells "R-O-S-E."

Maurice then writes his own name. He spells it accurately, and his letter formation is well-controlled.

Lapreader: "I'm going to write my last name. I bet you can't do that."

Maurice: "I can, too." He starts to print his last name,but gets stuck with the last two letters. Rose tells him 'e' and then asks, "What makes the 'errr' sound?" "R," answers Maurice.

Then Maurice copies "Rose." He also tries to copy Rose's last name, 'Gregory'. His "G" is not accurate. He prints
Rose points to where the gap is. "And you want to connect this line and this line." Next Maurice prints . "Now you forgot something," said Rose. "What did you forget?" Maurice looks at "Gregory" and puts an "r" between the G and e. "Yeah!" says Rose. Towards end of word Rose points to "y" and asks "What's this?" "Y", says Maurice. "Right," says Rose.

When Maurice has printed the whole word "Gregory', Rose says "Yeah" approvingly.

The researchers rarely had a chance to observe lapreading sessions, because they were busy taking notes on what was happening in the main classroom. Thus it was fortunate that lapreaders in Mrs. R.'s room were in the habit of writing notes about what happened after a reading session. By studying the comments made by various lapreaders over the course of a year for a given child, one can get an impression of the variety of ways in which lapreaders and children interacted. The following record of some of Janea's lapreading sessions tells the story:

October 10 - We read Hucklebug. Janea sat on my lap contentedly and interspersed her comments about "hucklebug" with comments about her sisters, her brother, her aunt Alice and her cousin. She liked Hucklebug so much, she is taking it home.

November 21 - She chose The Very Hungry Caterpillar; read along with me, imitating my sounds. She knew the story The Bear Friends and again read along, imitating sounds.
She asked me if I would show her how to write her name. I wrote it on a slip of paper. She practiced writing or trying to write the letters of her name. She took the paper home with her.

January 6 - She did "pretend reading" of Mr. M. She looked at the pictures to tell the story. Then I read it to her and she did "pretend reading" again. She listened to herself on the tape recorder telling both versions. Then I read her a story she selected from the bookshelf: The Waltons and the Birthday Present.
For her "pretend reading" she had nice inflection. Some words were muffled, some clearly articulated. The second pretend reading, after I read the book aloud, was slightly more elaborated, but she kept mainly to her conception of the story drawn from the bright-colored and humorous pictures. For both pretend readings, she added "The End." though none was supplied in the book.

January 21 - I read Little Donkey to Janea. She was interested for awhile, but I think she'd rather draw today.

January 27 - We read Birds. After we'd finished reading, I asked her which bird she liked and she showed it to me. Also, she attempted to write her name on the blackboard.

February 18 - Janea printed the letters she knew and told me the letter names as she printed.
We read Little Red Riding Hood. Janea wanted me to read, while she acted out the wolf's part in the story. She wanted to wear a wolf mask she had made in class.

March 4 - Janea read Play It Again, Charlie Brown to me. She wanted to read to me, rather than have me read to her. Then she wanted to write on the board and on paper.

March 26 - Janea loved Snow White and the Seven Dwarfs. She was able to tell me a few of the words. Then she wrote some numbers that were supposed to be her phone number.

May 5 - Janea had me read The Tale of Peter Rabbit. She practically knew it by heart. Then she played, while I read The Tale of Tom Kitten and A Visit to the Children's Zoo.
She also recited her ABC's.

As these comments reveal, the interactions between lapreader and child were varied. In the researchers' opinion, they came close to duplicating the kind of interaction that probably occurs between parent and child in the literate home environments of "early readers." That, of course, was our intention.

Predictably, lapreaders became a very popular feature of the class day. One of the researchers (Putnam) distinctly recalls taking notes in Mrs. R.'s room one day when a lapreader walked into the room. "Take me," called a child, and then another child. The look of delight on a child's face, when he or she was summoned to go with a lapreader, was unmistakable.

TAKING BOOKS HOME

The "homework" in this program was to take a book home every school night, and read. Ideally, someone at home would read to the children (again, the idea of the lapreading experience), but when that failed, the children were to read to themselves.

While some schools allow kindergarteners to take home books every now and then from their central library, few allow them to take home books belonging to the classroom. There are probably two reasons for this: a) checking out the books poses a logistical problem, because kindergarteners can't fill out the usual kind of library cards, and teachers don't have time to do it for them; and b) kindergarteners are considered too young to be trusted with caring properly for books.

The "literate environment" teachers managed to deal with these difficulties, however. The management issue was solved with a simplified

check-out system in which a child needed only to recognize his name. Each teacher covered a board with pockets that were labelled with the children's names. In order to check out a book, a child would remove a title card from the back of a book and place it in his or her name pocket. When the book was returned, the child would retrieve the title card from his or her name pocket and replace it in the back of the book. Teachers monitored both halves of the process - the returning of books when the children first entered the classroom, and the checking out of new books just before they left for home.

As for the condition of the books that were checked out, some problems did arise. Sometimes children would simply keep the books at home and report them as "lost." Sometimes they would return them, but with a favorite page ripped out. Sometimes there would be crayoning in books. The teachers experimented with various solutions during the year, but the best one was probably the one Mrs. R. adopted towards the end of the year. She made a rule: if a book was "lost," it had to be replaced, either with $1.00, or with a personal book from home. As soon as the rule went into effect, most of the "lost" books were returned. Encouraging the children to be responsible with the books they took home was considered important, not only for the sake of preserving the classroom library, but also for the sake of reinforcing an attitude that reading is a valued activity. If reading is to be viewed as special, then books must be treated as special.

DEVELOPING SKILLS

Three types of what might be considered formal lessons were woven into the "literate environment" approach: activities to develop metalinguistic awareness, a Syllabary program, and a Phonics workbook program. In addition to these, children were helped to develop word banks containing their favorite words.

Each of these skill-oriented activities will be explained in turn.

Metalinguistic Awareness Activities

The term "metalinguistic awareness" refers to a conscious knowledge of language properties - something many kindergarten-aged children do not have. They may be facile in their use of language, but most are not consciously aware of the linguistic elements which they manipulate so easily at an intuitive level.

One aspect of metalinguistic awareness that is critically important for learning to read is the insight that language can be broken into pieces of sound.

In order to help the kindergarteners in this program gain that insight, the "literate environment" curriculum included a metalinguistic component, which consisted of game-like exercises adapted from Jerome Rosner's Auditory-motor Skills Program (1973). The point of the exercises was to increase children's awareness of language segmentation at the word, syllable and phoneme level.

The most elementary activities involved the identification of missing words. A teacher might put two dashes on the board, and tell the children the first dash stood for "school," and the second dash stood for "yard." Together they said "school yard." She would then erase one of the dashes and ask the children which word was left. In another activity focussing on words, a teacher would designate one child to represent a word, like "Happy," and another child to represent another word, like "Birthday." She would ask the two of them - "Happy Birthday" - to stand in front of the class. Then she would motion one of the children to sit down and ask the other children what word was left. Both exercises, according to Mrs. W., were "easy" for the children.

The next level of activities focussed on the syllable unit. Initially teachers might have children clap the syllables as they said favorite words. After that, they might rearrange syllables - perhaps in the children's names - and ask the class to identify those names.

The most difficult exercise that the teachers advanced to during the year was one in which they asked something like this: "Do you hear 'bat' in 'batman'?" "Do you hear 'hill' in 'football'?" The children were to answer "yes" or "no" in response.

Mrs. R. reported the following anecdotal evidence that by May her children were getting the idea of listening for a syllable within a word. One day one of her children asked her, "Can you hear the word 'come' in 'wel-come'?" Another child, more mischievous, asked "Can you hear 'butt' in 'but-ton'?" (The latter question of course brought a laugh from the class.)

Although the major ideas for these metalinguistic exercises were taken from Jerome Rosner's program, two adaptations were made. For one thing, instead of drawing content material from stories written especially for these exercises (which is what the Rosner program did), the "literate environment" teachers used words and phrases taken from stories that had been read to the children, from familiar everyday phrases, and from the children's own suggestions. The idea of this adaptation was to use words that had personal meaning for the children. Thus words like "Superslob," "Merry Christmas" and "batman" replaced the words suggested for use in Rosner's program.

A second adaptation, which went beyond Rosner's original program, is that the "literate environment" teachers often printed the words that were being used. In one activity, for example, "Merry Christmas" was printed on a paper strip, and cut into syllables as the children watched. While the audience closed its eyes, the teacher or one of the children re-arranged those who were holding the syllables (so that now they might read "Christ - Mer - mas - ry"). The other children then opened their eyes, and attempted to read the jumbled syllables, before repositioning them in the proper order.

Metalinguistic awareness activities were generally conducted with the whole class. Only Mrs. R. began by offering children the choice of whether to participate or not. She noticed, however, that some children

whom she felt needed this kind of practice the most chose to do other things, so she made the activities whole group. (It should be noted that whole group exercises in metalinguistic awareness constituted one of the few times in the "literate environment" curriculum when children were not given a choice.)

Sometimes a metalinguistic awareness activity would last for 20 minutes, but more often it would be slipped in for 5 minute chunks during the day. The following excerpt from a March 19th observation shows how Mrs. B. conducted such an activity at the end of her morning session, as the children were getting ready to pick up their snack and go home.

Mrs. B.: "Remember that game we played the other day where I called your name backward and you had to listen?"
Child: "Oh yeah"
Mrs. B.: "We're going to do that today...As soon as you hear your name backwards - I'm only going to say it once, okay? - then you may come up very quietly, serve yourself and get into line.
Children: "Yes" / "Yeah"
Mrs. B.: "I'm going to say your names reversed, so that means you're really going to have to listen. En-Kar."
Children: "Karen"
Mrs. B.: "ya - Tan"
Children: "Tanya"
_____: "Don't tell them"
Mrs. B.: "It's okay, it's okay. It's alright if you tell them as long as you use your nice soft voices and don't shout it at me, so that we end up being.....mar - Ja"
Children: "Jamar"
Mrs. B.: "dy - San"
Children: "Sandy"
Mrs. B.: "Beautiful - cent - Vin"
Child: "Vincent"
Mrs. B.: "med - Ah"
Children: "Ahmed"
Mrs. B.: "san - Su"
Children: "Susan"
Mrs. B.: "ma - Al"
Children: "Alma"
Mrs. B.: "ris - Mor"
Children: "Morris" (one "mar - Ja")
Mrs. B.: "dia - Glen"
_____: "Glendia"
Mrs. B.: "dedra - Ka"
_____: "Kadedra"
Mrs. B.: "berly - Kim"
_____: "Kimberly"

Mrs. B.: "lanson - Al"
Child: "Alanson"
Mrs. B.: "ald - Ron"
Children: "Ronald"

Similar procedure followed for the other class members until they all have been called. Parents were arriving at the same time and leaving with their children.

Based on teacher reports, as well as direct observations of metalinguistic lessons in progress, the project director (Putnam) arrived at the following conclusions:

1) the number of activities Rosner recommends should be reduced, both to simplify the teachers' mastery of various activities, as well as to increase chances for advancing to the exercises which focus children's attention on the phoneme;

2) most of the metalinguistic exercises are best kept brief, since too much repetition of certain kinds of activities - like clapping syllables of words - appears to be boring for the children;

3) The use of visual print cues seemed helpful.

In the project director's opinion, however, the attempt to modify Jerome Rosner's program is far from complete. Further experimentation is required to arrive at the most satisfactory exercises and management techniques. Also, some systematic monitoring of children's acquisition of the segmentation skills being focussed on would be informative.

The Syllabary Program

The Syllabary program (Rozin et al., 1976) grew out of Lila Gleitman's and Paul Rozin's analysis of what is difficult about the beginning process of learning to read (see pp. 6 - 7). Theoretically, the program is designed to introduce children to the concept that a symbol (in this case a picture) can track a unit of sound (in this case a syllable). The idea is to acquaint them with these principles

before introducing the conceptually more difficult task of perceiving the phoneme - grapheme correspondence.

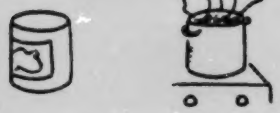
The core of the program is a set of storybooks in which rebus pictures map to the syllable unit (see the next two pages for a sample of what a Syllabary story looks like). Several preliminary activities prepare the children to 'read' these books, and once they are reading them, they can also work with element cards of the various rebus pictures representing the different syllables that are used in the stories. The goal is for the children to become so adept at combining these element cards that they can create new sentences which aren't in their books.

Ideally, the Syllabary program would be introduced to kindergarteners just a few weeks after the start of school. In the case of this study, however, the program wasn't started until second semester, because it took the teachers the entirety of the first semester to incorporate other aspects of the "literate environment" approach into their teaching.

In keeping with the atmosphere of choices and independence in work that existed in the "literate environment" kindergartens, children would 'read' the Syllabary books at their own pace. Thus different children in the room were likely to be on different books.

In order to manage this diversity of progress, Mrs. R. struck on the following management tactic. She would introduce each new Syllabary book to the whole group, by reading the book to them and having them echo read the lines after her. After these basic whole group introductions, the children were encouraged to read the Syllabary books to themselves or with each other, and when they were familiar with a book, they could read it to Mrs. R. herself. In this way, every child was acquainted with the same material, but different children were progressing at different rates when they read the books on their own.

Another adaptation was initiated by Mrs. B. When introducing a Syllabary book to the class for the first time, she made a point of duplicating the element cards with rebus pictures and syllables onto large cards so that an entire class might see them easily. Later she hit on the idea of producing two sets of large cards: one set with the

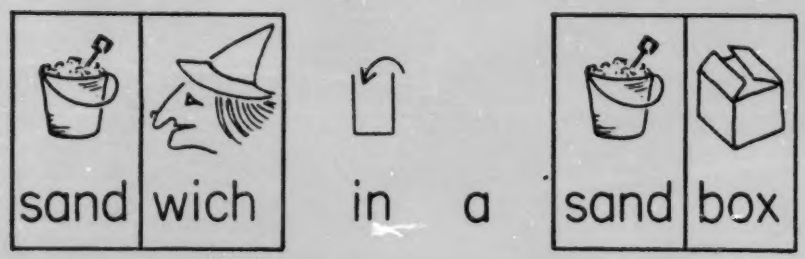


I can cook a cook y

in a sand box

2

And I can cook a



3

rebus picture and corresponding syllable on it, the other set with just the printed word. She would also run off rexographed copies of these element cards so that her children could take them home to work with (some of her children did, indeed, play with these copies of element cards at home; others did not.)

After repeated exposure to the Syllabary stories, most of the children in the "literate environment" kindergartens comprehended its root principle: that rebus pictures represented syllables, and that those pictures and syllables could be blended and arranged in different sequences to create different words and sentences. Only two children in Mrs. R.'s class, one child in Mrs. B.'s class and five children in Mrs. W.'s class did not understand that concept by year's end.

Not only did most of the children digest the intended concept, the teachers further reported the children were learning to recognize some of the printed words that accompanied the rebus pictures. Mrs. W. reported in late April, for example, that two boys in her class knew every word in the fourth Syllabary book without using the rebus pictures.

To the researchers it seemed that Syllabary books became an integral feature of the program. Children were observed reading them during booksharing and choice times, and sometimes during S.S.R. as well. They were observed copying Syllabary words during printing periods, asking for some of the words to be put in their word banks, and taking the books home to read.

Phonics Workbooks

The research on "early readers" suggests that in asking questions about print, the children initiated and directed their own learning to read process. This was possible, however, because in most cases parents or other adults at home responded to their questions with some attempt to help them understand the mechanics of reading. Some parents attempted explanations of letter-sound correspondences; some bought workbooks at the grocery store for their children to practice with; some helped their children with spelling and printing. Whatever means they chose, however, the point is they provided a kind of informal instruction, in response to their children's curiosity about print.

Given the pattern of help most "early readers" received, it seemed that if the "literate environment" curriculum were to accomplish its stated purpose of duplicating the "early reading" process as closely as possible, there would have to be some means of providing systematic instruction once the children evidenced an interest in learning to decode.

A Language Arts Phonics Workbook, developed by Dr. Morton Botel and JoAnn Seaver (1980), was chosen for that purpose.

Each lesson in these workbooks emphasizes a high frequency spelling pattern (including, for example, the /all, /ay, /ake, /an, /at patterns). Format is uniform, with each lesson consisting of the same four activities:

1) a chant using high frequency rhyming words, which the children can easily memorize after they echo read it several times with the teacher;

2) the same chant presented as a cloze activity, where the children fill in missing owrds;

3) a sentence-making activity, in which children cut out words used in that lesson's chant, and arrange them to match given sentences;

4) another chant emphasizing a beginning consonant sound - the object being to print three more words beginning with that sound.

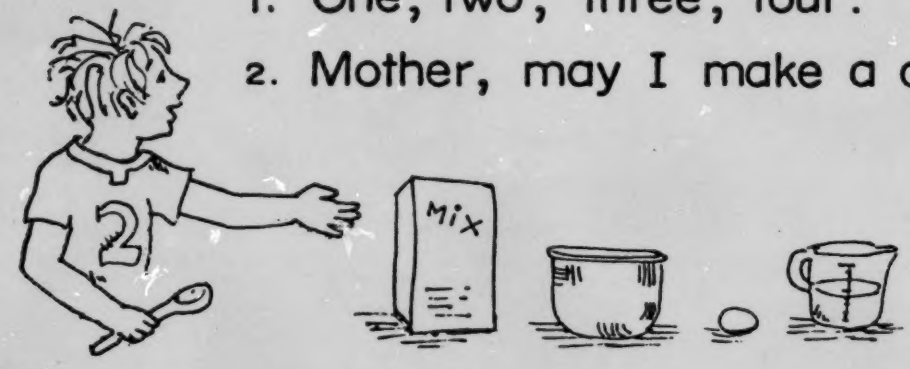
(See the next four pages for a sample of one of these phonics workbook units.)

In retrospect, the teachers agreed they would like to introduce the Phonics Workbook to their future classes in January or sooner. As it happened, though, this first year the teachers were so busy trying to implement all the various aspects of the "literate environment" program - including the Syllabary - that only Mrs. R. (with a full-day session) had a chance to get to the Phonics Workbook, and that was not until mid-March.

c/ake

1 2 3 4

1. One, two, three, four.
2. Mother, may I make a cake?



1. One, two, three, four.
2. Mother, may I bake a cake?

1. One, two, three, four.
2. Mother, may I take the cake?

1. Yes, you may.

Discuss the ideas in the chant. Read aloud the chant to the children.
Do "echo reading": you read a line, the children echo.
Do choral reading. Partners practice reading the chant together.

WRITE THE MISSING WORDS

1 2 3 4
One, two, three, _____.
Mother, may I _____ a cake?

One, two, _____, four.
Mother, may I _____ a cake?

One, _____, three, four.
Mother, may I take the _____?

Yes, you _____!

Children read each line and say "blank" for the blanks. They write the correct word in the write-in space. If in doubt, they can refer to the chant. Partners take turns reading the page and checking the work.

SENTENCE-MAKING

You read aloud the sentences and the words on the cards.
The children cut off the word cards. Pairs work together.
(1) They make sentences to match those on the page.
(2) They make their own sentences and take turns writing them.

Mother makes a cake.

I make a cake.

Mother bakes a cake.

I bake a cake.

I make mother bake a cake.

Save the sentence-making cards for the word-making activity on the next page.

mother	I	make makes	bake bakes	cake	a

A Chant for C

Follow the steps for the chant at the beginning of the unit.
List on the board words that the children offer.
Each child writes his/her choice of words in the write-in spaces.

Cat is a C word.
Call out another.

Cake is a C word.
Call out another.

Can is a C word.
Call out another.

Can a cat call a cake?
Can a cake call a cat?

WORD-MAKING: Demonstrate with larger word-making cards how words can be made with these letters. Children, working in pairs, use the shaded cards to make words and take turns writing them.

12

c b m ake all

It was when she noticed one of the girls in her class beginning to sound out words in book titles that Mrs. R. pulled out some Phonics Workbooks and invited whomever wanted to join in to do so. Five children attended that first lesson, and during the weeks that followed, most of the other children became interested as well.

Indeed, only four children remained uninterested, and three of them were the least knowledgeable children in the room with respect to print (they were the only ones who did not know the names of alphabet letters, for example); they would not have been ready for a phonics workbook in any event. What interested the researchers was that these children seemed to know they were not ready - yet another confirmation of the cognitive developmentalists' contention that children naturally gravitate towards tasks which "match" their level of cognitive development.

In terms of managing the children's progress in the Phonics Workbooks, the one difficulty was that each child tended to be on a different page; yet each child generally needed help reading the chant in a new lesson. One way of solving the problem was to have the children who were farther along help the children who were just beginning. Mrs. R. reported, for example, that Ellissa, who was breezing ahead in the workbook, would read chants to children who were not as far along as she. This removed some of the pressure on Mrs. R. to be with every child as he or she proceeded on to a new lesson.

Like the Syllabary, the Phonics Workbook soon became part of the daily routine in Mrs. R.'s room. Children would read or copy words from the various lessons during booksharing and printing period; they would work on their lessons with Mrs. R. during choice time (see pp. 115-120). and sometimes they would take the workbooks home to fill in pages overnight. Even the children who weren't using the phonics workbook knew the chants, just from having heard the other children repeat them.

One provision that was not made during this research year, that Mrs. R. suggested should be made in future years, was to accompany the Phonics Workbooks with a supply of easy-to-read books. As Mrs. R. noted, once the children started reading the workbook lesson, they wanted to try to decode other books as well, and for that, they needed access to books with easy words.

Word Banks

During second semester, the teachers started word banks for the children. They would print the children's favorite words for them, and these would be stored in a container (Mrs. R. used empty milk cartons). The rule was that in order to get a new word added to the bank, a child first had to read all the words he or she had.

This actually posed something of a logistical problem for teachers, because listening to each child read all his or her words, before printing a new word, could be time consuming. Mrs. B. and Mrs. R. tended to work this in either during booksharing and print period first thing in the morning, or during choice time. Mrs. W., however, tended to give out word bank cards during snack time. She would hold up various words, and tell the children, "If you can read it, you can have it." There was a drawback to doing it this way, however. It meant the words were coming from the teacher instead of from the child, and some of the motivation to read them may have been undercut. Certainly children in Mrs. W.'s room did not appear to use word bank cards to the extent they did in the other two kindergartens.

Word banks served as yet another way to interest children in the printed word, and they had the effect of helping to develop a small sight word vocabulary. By the spring of the year, word bank cards had become an important source of stimulation for reading and print, particularly in Mrs. R.'s kindergarten.

The cards were used in several different ways. When printing, the children often copied their word bank cards. They also began to play concentration with the cards - turning them face downwards and then trying to pick up matching paris of the same word (this, of course, required a duplicate set of words). Occasionally they made sentences with them - so long as articles and verbs were added to the collection of nouns. Finally, as the children became more adept at reading the words in their own banks, and as the number of words grew, they also became interested in reading their friends' words. A familiar sight in Mrs. R.'s class was that of two children sitting together, each taking turns holding up word cards and quizzing the other child as to what they were.

The following excerpt from the final observation in Mrs. R.'s room (May 15th) shows how some of the children were using word bank cards during booksharing and printing period. One can also get an idea of the kinds of words the children wanted to learn, since several children read their word bank cards to the researchers.

8:24 - Hakim is reading The Tale of Peter Rabbit
Ellissa, Kim, Heather, Alyce, Tamara are copying words on word bank cards. Ellissa and Kim share words as they do this.

8:25 - Kinzya arrives and takes out her word bank cards. She places them upside down on the desk top to play concentration game. As she lifts the cards up, she calls out the words: "jail/ ball/ floor/ star/ house/ tip/"
"This time I'll mix 'em up and I won't know where they are," she says.

At 8:27 - Mrs. R. announced "I have a lot of beautiful word bank cards, and I don't know whose they are. Who has 'cookie monster'?" (sometimes the children lose their cards, or exchange them with other children, so there are mix-ups.)

As Tiffany M. is looking at her word bank cards, she calls "Kyle" and shows him her card with his name on it.

At 8:32 - 16 children are working woth word banks (reading cards, playing concentration, or printing the words), and 4 are looking at books.

8:36 - Mrs. R. asks a group of children, "Did anybody read Lazy Jane today?"
Kinzya then reads the poem posted on chart paper on the board. "Very good," says Mrs. R.

8:40 - Kinzya turns her word bank cards up, so she can see the words before turning them face down. She repeats the words and points to each. She picks up 4 pairs of words from memory, and plays two times after that.

(Nearby, Michael blows his breath in Ellissa's face and she goes over to tell Mrs. R. Mrs. R. tells Michael and Hakim to move to the rug to work when she notices the disturbance.)

Kinzya reads her word bank cards to Watkins:
"Keita/ Sue Mac/ star/ tip/ house/ floor/ Frances/ light/ cake/ cook/ red/ Sister Pat/ stop/ book/ is/ duck/ Kinzya/ Troy/ donkey/ the/ Go/ ocean/ clock/ Erika/ Humpty/ dog/ ten/ me/ hear/ dump/ run/ pots/ Z/ Kin/ door/ Sat/ zoo/ green/ a/ no/ cat/ bed/ jail/ Mrs. Rapach/ ball"

Meanwhile, Maurice is reading his word bank cards to Putnam:

> "Ellissa/ Nnieka/ Balloons/ train/ exit/ board (Maurice reads it as 'baby')/ Lisa/ Baby/ rice/ tiger (Maurice reads 'green')/ Bianca/ King Kong/ key/ dog/ giraffe (Maurice reads it as 'green')/ Shakara/ Mommy/ red/ Batman/ leaf/ lion/ out/ in/ green/ zoo/ train/ one/ Cynthia/ Brick house by Maurice"

(note: There are duplicates of many of these words, for the purposes of playing concentration. Putnam tells him what the words 'Tiger,' 'giraffe' and 'board' are when he misreads them the first time, and he reads them all correctly the second time, stopping to check the bulletin board with animal pictures and printed labels before saying 'tiger' or 'giraffe'.)

Towards the end of this reading of word bank cards, Maurice announces, "I can close my eyes and read." (Apparently he is joking, because he reads Nnieka's cards with his eyes seemingly closed and gets them correct, which means he must have been slitting his eyes open slightly.)

Nnieka then insists on reading her word bank cards to Putnam:

> "Three Bears/ Hakim/ Zebra/ cup/ in/ star/ cat/ horse/ Snow White/ girl friend/ bear/ hot/ girl/ Pinocchio" (There are duplicates of most words.) Nnieka reads these all correctly.

LITERACY EVENTS DURING CHOICE TIME

Like most kindergartens, the "literate environment" classes offered periods of free play in which the children could choose to participate in traditional nursery school activities like painting, playing house, constructing things with blocks, putting together puzzles, etc. Unlike most kindergartens, however, the "literate environment" classes integrated a variety of reading and writing activities into these choice times as well.

Types of Print-Related Activities

There were essentially six categories of literacy - related activities which were available for "literate environment" kindergarteners to participate in during choice time.

1) Opportunities to work with letters:

There were various kinds of alphabet letters that children could work with: wooden, plastic, or foam rubber, as well as magnetic letters that adhered to a board. Also, there was a tray of coffee grounds available in which children could practice tracing letters (a risk-free activity, since errors could be easily wiped out).

2) Opportunities to read or be read to:

As at almost any other time during the day, children could look at books if they wished. If, on the other hand, they wanted to hear a story, there were several possibilities available. Sometimes a teacher or an aide would read a story to a small group. Sometimes lapreaders would come to the classroom at that time, and take individual children into another room to read to them. Sometimes, too, a listening center was open, where children could put on earphones and listen to a story-record as they looked at the corresponding book.

3) Opportunities to print:

Printing remained an important option during choice time. Sometimes the children merely used paper and magic marker to copy anything they wished - letters, or words from word bank cards, book titles,

rebus cards with pictures, Phonics workbook pages, etc. - just as they might do during booksharing and printing time (see pp. 44 - 55).

But sometimes the teachers thought up special projects to interest the children in printing, like writing letters to Santa Claus at Christmas, printing messages on Valentine's cards in February, and making Mother's Day cards in May.

Mrs. R. decided to help her children make miniature (4"x5") "books" of favorite stories or activities. The first project was a Three Bears book, in which the children colored in small picture outlines of bears, and then printed "The Three Bears" as best they could on the small construction paper cover of the book (an aide helped them). After they visited the zoo, the children made zoo books in which they colored and labelled pictures of various animals (again, with the help of a classroom aide).

Mrs. W. adapted the "book" idea to provide an incentive for her children to produce spontaneous printing. At Christmastime, she cut out construction paper reindeer faces, and the children made "Rudolph books," filling each reindeer-shaped "page" with whatever they wanted to print - perhaps their name, or some alphabet letters they were currently intrigued with, or some special word, like "Christmas," that the teacher had printed on paper strips for them to copy if they chose.

4) Regular center activities that are tied into print:

Children could form letters as they painted at the art easel. Clay could be used to shape letters, or to make props for a particular story - for example, beds and chairs for Goldilocks and The Three Bears. Block constructions could be labelled.

An example of how print could be linked to block play occurred in Mrs. B.'s room on January 28. Some boys had constructed a "motorcycle" out of blocks and asked Mrs. B. to print this sign: The Tree Motorcycle
814 Miles

One of the boys, Alonzo, was going to be the motorcycle driver who would jump over the long, elaborate structure the group had built. In keeping with his celebrity status, he signed "autographs" for the children before performing his stunt.

5) Follow-up activities to storyreadings:

Choice time was usually the time for follow-up activities to storyreadings. As previously discussed (see pp. 65 - 69), they included such things as making wolf masks after reading Little Red Riding Hood, making coolie hats to represent The Five Chinese Brothers, making Peter Rabbit's "ears," rolling out the dough for gingerbread people cookies after reading The Gingerbread Boy, writing letters after reading the Frog and Toad story "The Letter," making Captain Hook hats after reading Peter Pan, etc.

These activities were not mandatory; rather, they were offered as one activity choice, and children were free to participate or not.

6) "Lessons":

During second semester, teachers sometimes used part of choice time to hold Syllabary lessons for children who were interested, or to work with small groups of children on their Phonics workbooks.

Mrs. R., who usually held two choice times daily in her full day kindergarten, had the most opportunity to provide such instruction. For up to half an hour, she would station herself at a table designated as the "lesson center," and a small group of children would sit with her, all of them reading to themselves whatever Syllabary or Phonics workbook lesson they were on. They would then take turns reading to Mrs. R., and receiving individual help.

The Teacher as Catalyst, the Children as Collaborators

During choice time, the teachers tended to function as catalysts, initiating and maintaining the children's interest in literacy-related activities. They would move around the room, observe children in various activities, comment on their work, and make suggestions aimed at tying activities into books and print.

During a choice time on February 20, for example, Mrs. R. stopped to watch Kyle and Hakim working with blocks. She suggested they build a block structure that looked like something in a picture from Snow White (which the class had just dramatized that morning). She then moved to where Ellissa and Kinzya were working with miniature blocks and sticks.

"What are you making?" she asked.

Kinzya: "A house."

Mrs. R.: "Let's pick one story and make a house from that story."

Ellissa: "Three little pigs." Kinzya agreed.

Mrs. R.: "Which house are you going to make?"

Kinzya: "The one out of brick."

Mrs. R.: "Call me when you're finished, and I'll give you your card for it." (She was referring to a printed label of what the structure was).

With that, she moved on to observe and interact with other groups of children, while Kinzya and Ellissa built their brick houses, and discussed "the big bad wolf."

If the teachers could be described as catalysts during choice time, the children could be described as collaborators.

There were always children working alone, of course, but many of the children worked in pairs or small groups. They would chat as they worked. Sometimes they described what they were doing; sometimes they corrected each other; sometimes they suggested what to do next; sometimes they talked about other things. The following vignette is taken from the observation of choice time in Mrs. R.'s room on April 13:

Kinzya and Tiffany get the small alphabet letters and come to the table to sit down. Before actually sitting, Kinzya and Halona discuss who will sit in the chair.
The girls have some red and blue letters in each container. They sort the letters so Kinzya has the red and Tiffany the blue. Once they have sorted the set, Kinzya says, "I'm spelling my name." She picks out K I N and then mixes the letters up.
Tiffany pulls out the letters to spell B I A N C A , which she is copying from among a list of names on the chalkboard. After completing the name, she checks each letter against the chalkboard for accuracy. Tiffany then shows Kinzya her masterpiece.
Kinzya asks, "Now who you spelling?"
Tiffany: "Roy."
Kinzya then looks for the R.....

Usually the children would accomplish one task and shift easily into another. Partnerships and groupings remained in flux. When things were working well, the children seemed quite absorbed in what they were doing; there were few interruptions, few instances of children doing

something unproductive, and the noise level could be described as a gentle hub-bub.

The following excerpt shows what choice time was like at year's end in Mrs. R.'s room. While some children are engaged in traditional activities with blocks, beads, cuisenaire rods and puppets, others are working on phonics workbooks and other literacy-related activities. Mrs. R. is seen working with some children on phonics workbook "lessons," while the aide, Mrs. P., writes down individual children's dictations of stories. Children are observed working alone and with each other. Grouping patterns change throughout the period.

This was one of the researchers' most complete descriptions of a choice time, and hopefully it will convey some of the flavor of what it was like to be in the room at that time. The pursuits of Kinzya, a case study child, are followed particularly closely.

CHOICE TIME

10:03 - 11:04

Initial grouping pattern:

- Kyle and Hakim running across rug to hop on large numbers (soon they will leave numbers and get geo-boards)
- 3 are with cuisenaire rods
- Roy is on the floor with alphabet letters
- 2 are with brick blocks
- Sue Mac and Fran are stringing beads
- Maurice and Shawne are in blocks
- Ellissa and Tiffany M. are playing concentration with word bank cards
- Alyce is dictating a story to Mrs. P.
- Kinzya, Erika, Tamara are at tables with Mrs. R. reading phonics workbooks

(Watkins listens to Heather pretend read)

Putnam observes table with Mrs. R., Shawne, Tamara, Nakia, Kim, Kinzya and Erika. Shawne reads p. 25 in her phonics workbook to Mrs. R., while Kinzya finishes her milk and watches.
Kinzya continues to watch as Erika reads p. 25 next. She reads the Hats, Hats, Hats chant correctly, pointing to each word as she reads it.

text: "Hats, hats, hats
A hat for Pat.
A hat for a cat,
A hat for a rat.
Hats, hats, hats.
A hat for Ben,
A hat for men,
A hat for hens."

Nakia asks to take word bank cards home. Mrs. R. says yes.
Mrs. R. asks Erika to go back and read p. 17 in the workbook, since she hadn't listened to her read that page. To Kinzya, who is still drinking milk, she says: "Finish up. You're next."

Tamara is reading the first "Ball one" chant in workbook, pointing at the print as she reads.
Kinzya looks at Erika's word bank cards, then pulls out her own, finds the "ten" card, which she gives to Erika who uses it to copy "ten" in the appropriate space in her phonics book.
Erika to Kinzya: "I want to see a 't' word."
Kinzya sorts through her word bank cards again, and pulls out "the"
"Need another one?" she asks.
Erika: "Yeah."

Kinzya reads from her workbook:

"We met on a jet.
Jay, Jake and Jan.
We took the jet
And went to Japan.
We met on a jet.
Jan, Jake and Jay,
We took our pet
To (Far)

(Kinzya reads word by word, with little expression, but she is accurate)

Mrs. R.: "I'll help you with this. Make the sound of the beginning letter. FFFF."
Kinzya guesses "frog".
Putnam pointing to 'ar' in 'far,' covering the 'f' with finger.
"See this a-r? That says 'r.' "A - r' says 'r.' So if you put a 'fff' in front of 'ar' you get -"
Kinzya: "Far." She then reads "To Far Rockaway."
Putnam and Mrs. R. say "very good."

At a nearby table, the principal - Sister S_____ - is reading Sue Mac's dictated story (two sides of a large language experience paper) to Sue Mac. Mrs. P., who had taken the dictation, comes over and says to Sister S_____, "I loved the way she told that."

Mrs. P. is taking Halona's dictation of the Bears In the Night story. After writing each line, Mrs. P. says "Go ahead." At the end of the dictation Halona writes her name:

Hollona

Kinzya and Erika collaborate on p. 20 of the phonics workbook. Then Erika reads "The Pancake that Ran Away" to herself, and Kinzya reads "A Chant for D" to herself.

Kinzya then went on to read "The pet got wet" lesson. She said "pen" for "pet" and Putnam helped her see the difference. She also said "got" (for "got"), then changed her mind and said "get". Putnam listed "pot" on the board, and Kinzya gave the spellings for "hot/ bot/ cot" (first she gave 'k,' then 'c' for 'cot'). Then when Putnam printed 'got,' she read it with no trouble.

Kinzya goes to the board, prints 'can' and says the letters aloud. She turns around and listens to Tamara read the first chant in the phonics workbook. Taking a teacher-like role, she corrects Tamara when she makes a mistake.

Ellissa, Kinzya and Bianca at the board:
Ellissa, standing right next to the Lazy Jane poem, copies

Lazy
lazy
lazy
lazy
lazy

She then counts with her finger the number of "lazy"s on the language experience paper, and the number of "lazy"s she has printed.

Kinzya, standing in the middle, prints:
She is copying from the phonics workbook,
which she consults intermittently, between letters.

Bianca, on the right, is also printing a column of "Lazy"s

The three girls chat with one another as they print.

Meanwhile, Mrs. P. is taking dictation from Erika, who is pretend reading Bears In the Night (as did Halona before her).* Mrs. P. reminds Erika that she is writing each word as the child says them. When ready to write the next sentence, she says "Okay - remember I'm not taking shorthand here..."

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*(note: according to Mrs. R., it was the children's idea to dictate "pretend readings" of books for their language experience story. Mrs. R. had originally asked them to "tell a story." When the first child had taken a book over and started to pretend read, Mrs. R. said, "Oh, I didn't mean for you to read a book. I meant for you to tell a story." But the child wanted to pretend read. And the other children apparently wanted to as well, for they followed suit.)

10:37 - grouping patterns:

- Kyle with cuisenaire rods
- Sue Mac, Cynthia and Lisa with blocks
- Heather, Janea with geometric shapes
- Sarah is stringing beads
- Kim and Hakim are using cuisenaire rods
- Shkara and Bianca are drawing a picture on the board: of the "bride and groom"
- Michael, Maurice, Tamara, Fran and Nnieka are with Mrs. R., using the Phonics workbook
- Shawne is looking at a book: The Easter Egg Artist
- Halona and Roy are printing (separately)
- Tiffany J. and Nakia are reading word bank cards

Kyle is working with cuisenaire rods at the end of one set of desks, where Mrs. R. is working with several children on phonics workbooks.
Mrs. R. suggests to Kyle: "Why don't you try to make a 'k' with that?" and she shows him how. "You want to try?" she asks.
Kyle makes a "T", then rubs two sticks together. "If you rub two sticks together, you make fire."
Fran: "If you rub two pieces of dynamite together, you'll blow up."
Kyle: "Why, have you done it before?"

10:40 - Mrs. P. asks Kinzya to find a book to tell her a story (for language experience book). Kinzya goes to the bookshelf, finds a book - but instead of bringing it back to Mrs. P., she sits on the floor and pretend reads to herself. Mrs. P. calls her after a minute or so. Kinzya mutters, "I don't want to read a book," and takes over Old Hat, New Hat. As she dictates the following to Mrs. P., it seems that she is virtually reading the story:

"Old Hat - Old Hat - New Hat - New Hat - New Hat - New Hat - too big - too small - too flat - too tall - too long - too tight - too heavy - too light - too red - too dotty - too blue - too spotty - too fancy - too shiny - too frilly - too silly - too beady - too bumpy - too leafy - too lumpy - too twisty - too twirly - too wrinkly - too curly - too holey - too patchy - too feathery - too crooked - too pointy - too straight - too scratchy - wait! Just right - Just right, Just right, Just right, Just right - New Hat Old Hat"

The End

Kinzya

As Mrs. P. takes the dictation, she often says "Wait a minute" and sometimes repeats what Kinzya has said as she is printing it.
As this is going on, Roy is printing on the chalkboard behind Mrs. P. "I made a very long word" he announces proudly. His print looks something like this:

TOT NOMM
TOP TOOIMO WOCTOROMOTO
TOTTOW+L PBP

These letters are sprawled across two boards.

Tiffany M. and Kim had also been at the chalkboard.
Tiffany M.: "These are the words I know" and she prints 500
Kim: "You made your z backwards" and she makes a 'z' the proper way
Tiffany M.: "Tell me the words to write."
Kim leaves; Tiffany leaves and goes to the window.

Frances is reading the Phonics workbook. As she reads she points to the print. She reads page 33, 29, 45, 12, 5, 4. On page 5, she declares: "This one is my favorite page."
"I bet I can spell 'ball' with my eyes closed: B-A-L-L."
"If I cut out this one (b) and place it there (beside all) it will say ball."

Tamara is still reading the beginning lesson in the Phonics Workbook.

10:51 - After Kinzya has finished dictating her story of Old Hat, New Hat, she goes to the chalkboard, then to her phonics workbook, then over to the round print table with Mrs. R., Janea, Shkara and Bianca.
Mrs. R. explains what they are doing: There are colored plastic shapes in front of her: "We're makin letters."
Kinzya puts the following shapes together for an "A"

Mrs. R.: "How many triangles?"
Kinzya: "Two."
Mrs. R.: "How many rectangles?"
Kinzya: "Four."

As Janea pulls plastic shapes out of the box, Mrs. R. suggests:
"Now you make a 'b'."
"What should Shkara try?" she asks.
Kinzya: "A 'D'."
Shkara indicates no, and Mrs. R. says: "Shkara doesn't want to."
Nakia comes over and reports that the other girls don't like her anymore; Mrs. R. consoles her, but suggests she go to another activity area and not crowd them.

10:58 - group patterns:

- Roy dictating story to Mrs. P., who writes it on large paper.
- Tamara is printing numbers on the board.
- Michael is sentence-combining words he has cut out from phonics workbook: "Can Mother play ball"
- Erika is filling in her phonics workbook, while Maurice watches and makes suggestions.
- Alyce is printing, with her word bank cards in front of her
- Fran is reading her phonics workbook to researcher Watkins; Bianca and Ellissa are talking to the researcher
- Halona is printing, copying "Up Spook Hill" from Bears In the Night.
- Kinzya, Erika, Alyce, Bianca and Shkara are working with Mrs. R., putting geometric shaped plastic pieces into outline of letters
- Kyle and Nnieka are collaborating on cuisenaire rods
- Hakim, Kim, Cynthia, Sue Mac and Lisa with blocks
- Sarah with puppets
- Heather, Shawne, Tiffany J. with clay. (Tiffany is making "a boy with pee-wee," while Heather is making "a snake")

CONCLUSION

In attempting to describe the "literate environment" approach and how it operates, we have focussed primarily on the various kinds of literacy events which occurred. There is more to the story, however, for there is more to a curricular approach that its modus operandi.

One of the major insights that emerged in the process of defining and actualizing the "literate environment" approach, was the realization that certain mindsets on the part of the teacher were critical to the successful implementation of the program. Once a teacher had integrated these mindsets, it seemed, she would be capable of inventing endless variations of literacy-related activities which would preserve the essential spirit of the approach. Without these mindsets, however, an attempt to implement even a piece of the program was likely to miss the mark.

Before elaborating on those mindsets which are unique to this program, two attitudes should be mentioned that are as critical for the success of this approach as they would be for the success of any curricular approach, regardless of philosophical bent.

The first of those attitudes has to do with a teacher's belief that the children she is working with can learn readily if only the program is right. When, as was the case in this study, she works with children who tend to score well below the national average on standardized tests, it is particularly important that she perceive their problem as a lack of experience, and not as a lack of intelligence.

The second attitude has to do with a teacher's enthusiasm for what she is teaching. Imagine for a moment that two teachers read the same story to their kindergarteners, ask the same questions, and respond with the same words to the children's comments. But one teacher does so with a hint of boredom and irritation in her voice, while the other conveys a sense of enthusiasm in her tone. Such a contrast is highly improbable, of course, since attitudes usually inform actions. But if such a contrast were possible, it is quite certain that the difference in teacher tone would evoke very different responses in the students. Very few programs, of course, could fare well with the latter kind of teacher.

Assuming, then, that a teacher believes strongly in the capability of her pupils, and that she conveys an enthusiasm for reading and print, she will need to absorb the following four mindsets in order to implement the "literate environment" program successfully.

1) Belief in a holistic approach to reading readiness

Simply stated, this involves the notion that the best introduction to reading and writing is reading and writing. The expectation is that if children, who can not as yet decode, are encouraged to imitate and experiment with these behaviors, they will slowly advance from global approximations of the real thing to increasingly sophisticated versions. In the process of being exposed to literature, and making their own efforts to read and write, much of what they will need to know about print can be induced by them. The rest can be taught - but <u>after</u> children have become sufficiently curious about the mechanics of decoding to ask questions. Skillwork is included in the program, but it is not the first step. Rather, the first step is to establish the acts of reading and writing as personally meaningful to the children.

2) Commitment to giving children choice in what they read and print

In this case, the underlying assumption is that structured freedom leads to involvement. If children are given the opportunity to choose among a variety of literacy-related tasks, and if they are given the opportunity to choose which books they will read and which words they will print, the belief is they will concentrate harder and longer on reading and writing.

A corollary assumption is that children are well able to choose those tasks which best "match" their level of expertise. Generally speaking, they will choose or invent tasks which are slightly novel, and which allow them to practice needed skills or evolve new hypotheses.

The commitment to choice poses several challenges for the teacher. In order for freedom of choice to be productive, there need to be parameters on the spectrum of choices. Children cannot be free to do anything - to disrupt another child, for example, or to remain uninvolved. Also, there should be an ample and interesting enough supply both of

materials and tasks, so the options available are ones the children want to select. Finally, teacher guidance is essential; children who are encouraged to read and write before they can decode need feedback on their various experiments.

3) Extemporaneous stressing of print and reading

Since the main path to skill acquisition in this curricular approach lies in the children's own explorations with reading and writing, there is a sense in which the children direct their own learning process. The teachers' role in this is twofold: to orchestrate activities that will stimulate the children's interest in literacy on the one hand, and to respond to their questions and productions on the other hand. The latter requires flexibility - a knack for creating teaching moments in response to what the children are doing. Some of the best teaching moments, for example, may occur as a teacher circulates during book-sharing and printing period, showing one child how to print a letter correctly, helping another child to sound out the letters in a word she wants to spell, suggesting how yet another child might extend what he is doing. Some of the most enjoyable literacy events may occur as a result of a child's suggestion - for example, to "play" a story. In order to take advantage of these opportunities, a teacher has to be willing to teach extemporaneously, as the situation arises, even if it means temporarily scrapping an activity that was previously planned for a certain period.

Another kind of extemporaneous teaching involves the seizing of opportunities to tie print into routine classroom events. In this case, the idea is to invest reading and writing with importance and relevance, to make them a natural part of everyday life in the classroom.

Mrs. W. was particularly good at doing this, as the following examples illustrate. When a child brought her a flower, or a piece of candy, instead of saying "thank you" verbally, she would print a "thank you" note. When the classroom bathroom wasn't being properly cared for, she posted a sign, featuring a word from one of the children's favorite books. The sign read: "Don't be a superslob. Flush!" On a day when the children were preparing to go outside for recess, and it started to rain, Mrs. W. saw another opportunity to transform the moment into a

literacy event. She walked to the window and looked out; then she walked to the chalkboard, a sad expression on her face. Without saying a word, she printed "It's raining." "I don't even have to tell you what it's doing outside," she told the children. "You can read it for yourselves."

4) Centering on books

In most kindergarten programs, books are used for storyreadings, but not much else. Overall, they play a minor role in the day's events.

Not so in the "literate environment" kindergartens. Here, books lie at the hub of activity. As Mrs. W. noted, "you start with books."

Other activities flow from the books. Dramatizations follow storyreadings; art projects and science projects pick up on story themes; children pretend read and discuss the same books that have been read to them by the teacher; characters' names find their way into word banks; book titles and phrases find their way into children's print products.

So many literacy-related activities tie into books that books are an integral part of class life. They lie at the heart of the "literate environment" approach.

IV. CHILDREN'S REPONSE TO THE "LITERATE ENVIRONMENT" APPROACH

Even though most of the kindergarteners in this study could not decode, their predominant response to the "literate environment" curriculum was to read and write.

The nature of that reading and writing will be the subject of the first two sub-sections in this chapter. Following those analyses there will be a discussion of the various ways in which the children's awareness of print developed, and of the strategies they employed in this learning process. Concluding remarks will present an overview of literacy-related behaviors and gains.

PRETEND READING

Pretend reading is a kind of imitation of reading, generally performed by youngsters who cannot, as yet, decode.

As they turn the pages of a book, pretend readers tell a story. Usually it is based on a "reading" of the illustrations, as well as on prior knowledge of the story (from having heard it read aloud). Bookish sounding phrases and character dialogue may be woven into the storyline, and the whole is delivered with the intonation patterns of a fluent reader. The delivery style is particularly convincing, to the point that pretend reading can sound like the real thing. Indeed, if a child's command of language is good enough, or if a story has been partially memorized, the imitation can be so convincing an adult would have to check the text to know the truth.

Pretend reading was a common occurrence in the "literate environment" kindergartens. Obviously the behavior was spontaneous, because it emerged well before researchers or teachers recognized its significance and began to reinforce it.

Pretend reading is not new, of course. It tends to surface, naturally, in settings where pre-decoders are read to and encouraged to look at books. Certainly many parents have observed their preschoolers muttering pretend readings to themselves, or perhaps to a doll, even to the dog.

Despite the commonness of pretend reading among young children, however, the phenomenon has barely been researched.

As mentioned earlier (p. 37), we know of only one study (unpublished at that) which explores the mechanics of pretend reading. Conducted by a Canadian - David Doake (1979) - it focussed on a few children's pretend readings in their home setting.

To date, there has been no study of pretend readings produced in a classroom setting. Indeed, the only mention of youngsters pretend reading in school comes from Scotland. When Lomax (1977) observed the reading area behaviors of 28 three and four-year-olds in a nursery school located in an industrial region of Scotland, he commented in passing that the "children frequently spoke to themselves or their friends in the manner of someone reading as they looked through the books. This 'pretend reading' was quite different in style and delivery from interspersed comments on the story." (p. 105) No further description was given.

Our study, then, constitutes the first attempt we know of to scrutinize pretend reading in a school setting. Although the following analysis provides mostly an overview, it is designed to outline the complexities of the task, and the potential usefulness of pretend reading in the learning to read process.

The Children's Attitude Towards Pretend Reading

The fact that pretend readings erupted spontaneously, without having to be taught, suggests that such productions were intrinsically pleasurable for the children.

Beyond the inherent appeal of pretend reading, however, the "literate environment" approach may have augmented the extent to which children valued the activity by lending an element of public recognition to it. Once teachers and researchers began to pay attention to pretend readings, there is little doubt they became a status activity.

Pretend reading to a researcher, who was either taperecording or writing down the children's words, was most certainly a status activity. Indeed, one researcher can recall several instances of two children pretend reading simultaneously into each of her ears.

Any child who asked to go into another room to pretend read into a tape recorder was most eager to go; and usually when that child returned to class, other children asked if they could go.

Not only did teachers and researchers provide an audience for pretend readings, other children listened as well. Many pretend readings were delivered as soliloquies, it is true, but many other readings were shared between children.

JoAnn Seaver, a University of Pennsylvania doctoral student who investigated the pretend readings of several children in Mrs. R.'s room during second semester, described the norms of interaction which pertained during a public pretend reading:

> ...the reader 'holds the floor.' The rule for children being read to is that they sit quietly and interrupt or join in only at appropriate times so that the reader can be heard and the story is not disrupted. When a child becomes a pretend reader, the rules protecting the reader apply to him. To command these rules may be appealing to a child. Five-year-old Roy declared...'Mrs. R. said that when you're reading, nobody can disturb you.' (1981, p. 8)

Despite the fact that pretend reading was an enjoyable activity, and one that was encouraged by the teachers, it did appear to have its time and place. Once a child started attempting to decode, pretend reading tended to drop out of view.

The first time this was noticed was on a December 17th observation in Mrs. R.'s room, when Hugh, the first child in any of the three "literate environment" kindergartens to give evidence of breaking the code, refused to pretend read. Putnam noticed it when she asked him to "read" to some New Jersey teachers, who were visiting the classroom that day. Assuming that he would pretend read for them in the same fashion she had heard him do in previous months, she was surprised to hear him pick out, instead, the few words he could decode. No amount of coaxing him to read the story fluently helped. Apparently he had reached a new stage in the learning to read process, one in which he was no longer interested in merely imitating the act of reading. In this stage, he was quite willing to forego a sense of fluency in order to plod through the mechanics of decoding.

The same phenomenon was observed in Kinzya, one of the case study children in Mrs. R.'s room. During a February 20th observation, she had willingly pretend read Snow White to Putnam. Three months later, however, when she was being videotaped in a lapreading session, she displayed a different reaction. First the lapreader read Snow White to her, and then Kinzya announced she would read the story to the lapreader. But she couldn't get past the title. After struggling to decode each word and failing, she fell silent. The lapreader urged her to "just tell the story", but Kinzya said she could not. She appeared quite uncomfortable, until finally she left the room and returned with a simpler book in hand. The smile on her face told the story - at last, here was something she could read in the way she wanted to. With the lapreader's help, she proceeded to decode each word in The Fly Went By. Gone were the fluent sentences of pretend reading. In their place were the halting, word-by-word renditions of the beginning decoder. A look of victory was apparent on Kinzya's face.

The hypothesis that Kinzya had entered a new stage was confirmed when, two weeks later, Putnam asked her to read Peter Rabbit. "I don't know how to read it," she replied. Putnam urged her to just tell the story, but Kinzya appeared unwilling to do this.

Putnam: "What do you want to do?"

Kinzya: "Read it for real."

Having progressed to the point where she understood the secret of letter-sound correspondences, Kinzya apparently judged pretend reading to be a fake. It no longer served her purpose.

Integrating Reading-Like Behaviors

Pretend reading may seem effortless on the part of the child, but in reality it is a complex performance, requiring the integration of several reading-like behaviors.

- Book handling

Almost all the children mastered the basics of book handling with ease. A child was never seen to hold a book upside-down, for example, and it was rare to see someone "reading" from the back of the book to the front.

• Awareness of print, and the directional principle

It was common to see children pointing to the print as they pretend read. In the beginning of the year, the fingers sometimes moved from right to left, but most children soon caught on to the left-right sweep.

Sometimes finger-pointing was minimal, consisting of only an occasional and vague left-to-right sweep across a block of print. Those children who were more knowledgeable about print, however, tended to be more precise in their finger-pointing. The following behavior, displayed by Kimberly during a pretend reading of The Three Little Pigs, was not unusual:

> During the entire reading, Kimberly runs her finger along underneath individual lines of print, starting with the top line, and moving down line by line. In order to keep her finger moving under the print, she must be looking at the print, instead of at the pictures. (Jan. 28th observation, Mrs. B.'s room)

If the children knew a book by heart - as many did Bears In the Night - then it was likely that the words they were pointing to would actually match the words they were saying.

• The "voice" of reading

After observing pretend reading behaviors of several children in Mrs. R.'s class, Seaver (1981) noted that the children employed "three registers: book-reading register, character-speaking register, and addressing-remarks-to-the-listener, or conversational register." The differences were as follows. During the actual pretend reading, speech was characterized by an "even rhymthm, moderate pitch and volume." Smooth and flowing, it was like the reading voice of adults. When character dialogue was interjected into the reading, it was marked by "expressive intonation." Both these reading voices were quite different from the conversational tone, however, that was adopted if there was a break in the reading. When a child stopped to interject a comment to a listener (be it friend or researcher), the register that was used was "higher pitched, more rapid, louder than book-reading."

• Telling a story from the pictures

Since pretend readers cannot decode, they must take their story cues from sources other than the print.

Illustrations are, of course, critical for this purpose. As Maurice once remarked to a researcher, "I can't read without the pictures." Indeed, if a child has never heard a story read before, pictures provide the only source of information for a pretend reading.

Children vary, of course, in their ability to translate picture cues into a smooth, coherent storyline. Both their facility with language, and their experience with stories in general have a bearing on the quality of their production.

One of the most interesting examples of a child reading a picture occurred when Ellissa fabricated a poem to accompany the illustration (shown below) that appears in Where the Sidewalk Ends, Shel Silverstein's book of humorous poems.

Ellissa had never heard this particular poem before, but she knew it was in a book of poems, and so created a pretend reading that invoked the rhythm of verse.

Ellissa's poem:

"Oh my gosh of this
Have some fun.
My head is down where
My waist is.
Oh me, oh my,
I lost myself.
Around and around I go
Something-something-something
I wish my head would go back
Where it was.

Foowee me, foowee me.
Oh me, oh my.
I don't know where my head is,
I'll push it back up.
I'mo turn the pages.
I'mo turn the book."

(May 15, Mrs. R.'s class)

- Integrating knowledge of a story that is read aloud

Familiarity with a story from having heard it read aloud constitutes another major source of cues for pretend readings. The more times a child has heard a particular story read aloud, of course, the more likely it is that factual details from the real story will crop up in a pretend reading.

Take, for example, the following pretend reading of Peter Rabbit by Tamara (in Mrs. R.'s class). This reading was produced at the end of May, after the story had been read aloud in class and dramatized on numerous occasions.

> "The Tale of Peter Rabbit.....They lived under a big fir tree. Their names were Flopsy, Mopsy and Cottontail and Peter. She - the mother bunny rabbit - said, 'Don't get into mischis cause your father got put in a pie by Mr. McGregor. You will go up the lane and pick blackberries,' she said. And then she said, 'Don't get lost, cause I'm goin to the bakery.' And she went on to git some - some - (not some wheat bread ---what kind of bread that is? Uh- I'll think of it -) 'I will get some rye bread.' (What's this round thing and they have raisins in them? Putnam answers "currant") currant buns. Flopsy and Mopsy went down the lane and picked some blackberries. And den Peter was a naughty boy - he went down the lane and under Mr. McGregor's gate. And den he went to git some carrots, and den Peter were rather feeling sick and he get some fresh beans. And den next to the cucumber frame guess who he meet? Mr. McGregor - noboby but Mr. McGregor puttin fresh cabbages in. And den he said, 'Stop thief! Stop thief!' And Peter ran; and his shoe was by the potatoes and by the cabbages. And he got stuck in a gooseberry net. The birds desert him and make him try and try. He- Mr. McGregor - put on a fizz (Tamara's word for the sieve in the illustration) and Peter ran. And then he got in the water-pot. And then Mr. McGregor looked in every flower pot. And Peter sneezed 'Ah-choo!' Mr. McGregor was after him in no time. Peter was tired. And den he saw a mouse come out the house with a large pea in his mouth and then he shaked his head - no, he couldn't get in. Den he sat - den he sat by Mr. McGregor's water and his fresh cabbages and den a cat was next to him, like his tail wasn't alive. His cousin, Benjamin Bunny, told him all about cats and den he heard somethin go "Scratch, scratch' and den he hopped right down. He saw the gate and Mr. McGregor was right after him. And den Mr. McGregor took his shoes and jacket to scare the balackbirds away. And den he ran home to Flopsy and Mopsy were lookin and mother was cookin and didn't see him. And den he was layin down

on the floor. And den one pleasant evening Peter wasn't feeling good. He had to drink some chamomile tea: one spoonful at nighttime, one spoonful at noon. And den Flopsy and Mopsy had blackberries and bread and milk.
The End."

Tamara's pretend reading has some rough edges: a few words are mispronounced ("mischief" becomes "mischis"); tense usage is not always correct, at least for standard dialect; and there are some run-on sentences, with frequent use of "and den" as a lead-in (the pronunciation of "then" as "den" reflects a phonological difference of non-standard dialect). With respect to the story's factual content, a few details are left out and there are two errors: Mrs. Rabbit bought "brown bread", not "rye bread"; and the cat's tail looked "As if it were alive," not, as Tamara said, as if it "wasn't alive."

Apart from these minor aberrations, however, Tamara wove a rather impressive array of accurate detail into her "reading".

The following are a list of some of the facts she incorporated - facts which must have sprung from her memory of the book when it was read aloud, since they could not possibly be inferred from Beatrix Potter's illustrations. These facts includes:

- the names of Flopsy, Mopsy and Cottontail, along with the fact that they lived under a "big fir tree";
- Mrs. Rabbit's directives to her children as she sets off for the bakery, including the information about what happened to Mr. Rabbit;
- whose garden Peter was in;
- the fact that Mr. McGregor was by a "cucumber frame" and that he was planting "fresh cabbages;
- McGregor's "Stop thief! Stop thief!" speech;
- where Peter lost his shoe: "by the potatoes and by the cabbages";
- that the net he was stuck in was a gooseberry net;
- that McGregor found Peter in the watering can when he sneezed "Ah-choo";
- the phrase "Mr. McGregor was after him in no time";
- that the mouse Peter met had a "large pea" in his mouth (in the book it was a "her");
- that Peter's cousin, Benjamin Bunny, had told him all about cats;
- that Peter's mother gave him chamomile tea;
- that Flopsy and Mopsy had blackberries, bread and milk.

It is ironic that in pretend readings such as Tamara's, children readily produce the very kinds of information that "reading comprehension" questions in many basal reading series focus on.

Take, for example, a "comprehension" lesson on Peter Rabbit which appears in the reading readiness program published by Holt, Rinehart and Winston (producers of one of the six top-selling basal reading series in the U.S.). The lesson calls for a teacher to read Peter Rabbit aloud to the children, and then to ask 11 factual recall questions, including: the names of the children in the rabbit family; where Mrs. Rabbit went; what had happened to Mr. Rabbit; what the children were supposed to do; what vegetables Peter went after in the garden; how he lost his shoe; what happened to his jacket; etc.[1]

The irony is this: not only did Tamara and the other children in her class who were familiar with Peter Rabbit automatically integrate this kind of factual detail into their pretend readings of the story, they also presented it in sequence, produced quotes from the story, and attempted to employ both vocabulary terms and syntactic structures from the book. Clearly their pretend readings involved a far more complex recall of story than would be required to answer the usual kind of "reading comprehension" question.

- "Memory Reading"

When Durkin (1966) interviewed parents of "early readers", she found that when they commented on "their children's request to have the same story read over and over again, they also tended to mention the ease with which the children memorized the stories." (p. 109)

Children in the "literate environment" classrooms responded in the same way, it was discovered. The more times they heard a particular story read aloud, the more familiar they became with its language and plot, and the closer their pretend readings came to the text itself.

If a book contained only a few words per page, and if its language was predictable - as in the case of Bears In The Night - then the children in our study were quite likely to memorize and deliver the entire text verbatim: "Out of bed, to the window, out the window, down the tree, over the wall," etc. If an oft-repeated story was more

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[1] This lesson appeared in Everttts, Eldonna et al. About Me - Teacher's Edition. New York: Holt, Rinehart and Winston, Publishers, 1977.

complex, however, then a child was more likely to render parts of the text verbatim, and to mix them in with self-produced lines. The following pretend reading illustrates the point.

Kimberly (a case study child in Mrs. B.'s class) was very fond of Where The Wild Things Are. She had heard Mrs. B. read it several times; she had listened to it on a record as she looked at the book; and she pretend read it to herself frequently.

In this transcription from May 7th, we present Kimberly's "reading" opposite the original text, to show how close the two come at times. Indeed, as Putnam listened to the child "read" the first several pages, pointing to each word as she said it, the researcher thought perhaps Kimberly was actually decoding. To find out, she asked the child to point to the word "terrible." With great confidence Kimberly pointed to "roared", indicating that her previous accuracy had been a product of memory and not decoding skill.

Text	Kimberly's "reading"
The night Max wore his wolf suit and made mischief of one kind	"The night Max wore his wolf suit and made mischief of one kind
and another	"and another
his mother called him "WILD THING!" and Max said "I'LL EAT YOU UP!" so he was sent to bed without eating anything.	"his mother called him a wild thing of all. Max said, 'I eat you up' and so he was sent to bed without any supper.
That very night in Max's room a forest grew	"Max turned his room into a forest room.
and grew -	"and grew
and grew until his ceiling hung with vines and the walls became the world all around	"until his vines in his room became the world - all around.
and an ocean tumbled by with a private boat for Max and he sailed off through night and day	"and a ocean tunneled by a private boat for Max
and in and out of weeks and almost over a year to where the wild things are.	"So soon he came where the wild things were.

Text	Kimberly's "reading"
And when he came to the place where the wild things are they roared their terrible roars and gnashed their terrible teeth	"And then when he got there they roared their terrible teeth, they showed their terrible roa[illegible]
till Max said "BE STILL!" and tamed them with the magic trick	"So Max tamed them and did the magic trick
of staring into all their yellow eyes without blinking once and they were frightened and called him the most wild thing of all	"and stared into their yellow eyes ...(inaudible)
and made him king of all wild things.	"So they made them the king - the - of all the wild things.
"And now," cried Max, "let the wild rumpus start!"	-
"Now stop!" Max said and sent the wild things off to bed without their supper. And Max the king of all wild things was lonely and wanted to be where someone loved him best of all.	"'Now stop,' said Max and sent them off to bed without any supper. So the king of all the wild things - so the king of all the wild things
Then all around from far away across the world he smelled good things to eat so he gave up being king of where the wild things are.	(inaudible few words) good things to eat."

9:24 -
At this point the pretend reading is interrupted....

"Talking Like a Book"

When pretend reading, children attempt not only to produce a meaningful story, but also to "talk like a book."

This attempt goes much deeper than merely starting off with the traditional "once upon a time". It also involves attempts to assimilate new vocabulary terms from stories, and to use syntactic structures reminiscent of the more complex language in books.

• Incorporating new words

Occasional efforts to use book vocabulary were evident in the ten pretend readings of Peter Rabbit which Putnam recorded in Mrs. R.'s class at the end of the school year.

Ellissa said that Peter was "damp" when he sat in the watering can. Cynthia and Peter "squeezed" under the gate, and later on in the story, when he returned home after his escapade in Mr. McGregor's garden, he "flopped" on the ground. Several of the children used terms like "currant buns", "chamomile tea", "parsley" and "gooseberry net", all of which were quite specific to Peter Rabbit.

The children's attempts to incorporate unfamiliar words and phrases were not always smooth, however, as the following examples reveal:

....Maurice said "gootberry net" instead of "gooseberry net";

....Nnieka finished her rendition with "And Peter had a loaf of tea." When a child who was listening to her reading laughed, Nnieka corrected herself: "I mean a spoon of tea."

....Tamara's version of Mrs. Rabbit's famous "Don't get into mischief" warning came out as "Don't get into mischis." And when she arrived at the part where Peter is caught in the gooseberry net and the birds urge him to try harder to free himself, she said "The birds desert him and make him try and try." She cannot define the word "desert" when asked to, but she has probably adapted it from "exert", since the text read that the birds "implored" Peter "to exert himself".

....Ellissa used a sophisticated sentence pattern, but ended with a mispronunciation: "And feeling rather sick he went to look for some parshley." And at the story's end she related that "Peter had one scoop of chamomile tea before he sent to sleep."

The point of these examples is to demonstrate that children sometimes miss the mark when experimenting with book language. In this respect, pretend readings are like practice sessions in any endeavor: mistakes are inevitable on the way to mastering a skill.

• Adopting the syntactic structures of book language

The following excerpts show that in their pretend readings of Peter Rabbit, the children occasionally employed sentence patterns that were different from ones they generally used in everyday conversation.

Maurice: "...and first he ate some carrots, then some lettuce, then fresh beans, then some potatoes."

Nnieka: "Feelin rather sick he went - he looked for black beans." ...."He lost one shoe by the potatoes and he lost the other shoe by the cabbages."

Cynthia: "Then he went around the cucumber bush and who did he meet but Mr. McGregor."

Ellissa: "But Peter, who was very naughty, ran straight away; he ran straight away to Mr. McGregor's garden, and slipped under the gate."

Tamara: "And den one pleasant evening Peter wasn't feeling good. He had to drink some chamomile tea: one spoonful at nighttime, one spoonful at noon."

These more sophisticated sentence patterns could not be said to permeate the children's pretend readings; rather they were sprinkled throughout in the manner of seasoning. The fact that they were in evidence at all, however, suggests that the children were internalizing syntactic structures they had heard in the many storyreadings they were exposed to during the year. They were, in effect, "lifting" book talk and incorporating it into their pretend readings.

• A blending of standard and non-standard dialect

For the children in this study, most of whom used Black English dialect features in their everyday speech, the attempt to produce syntactically acceptable language involved a further twist: their pretend readings evoked efforts to use standard dialect.

The result, generally, was a blending of standard and non-standard dialect features. The following pretend reading of The Three Little Pigs by Kimberly (in Mrs. B.'s class) illustrates the point. In it she uses two instances of non-standard dialect: "he be comin down the chimney" and "the wolf had came down the chimney." In all other cases, however, her use of tense is standard.

> The Three Little Pigs....The first little piggy said, 'Could I have some hay so I can (rest of sentence inaudible). The next day the wolf came knocking on the little pig's door.
> 'Little pig, little pig, let me in.'
> 'Not by the hair of my chinny-chin-chin.'
> 'I will huff, I will puff, I will blow your house in.'

> The second little piggy said, 'Can I have some sticks so I can make a house?' The man got him some sticks. The wolf came knocking on the little pig's door the next day. 'Little pig, little pig, let me in.'
> 'Not by the hair of my chinny-chin-chin.'
> 'I will huff, I will puff, I will blow your house in.'
> The wolf was that he be comin down the chimney the next day...'Oh, yes, it would be good to come in and rest.' The third little piggy went out to get some apples. The wolf had came down the chimney the next day and he fell - he fell into the fire. Yow! Yow! Yow! (January 28th)

The children's tendency to code-switch into standard dialect when pretend reading raises an interesting question. Could the linguistic practice associated with pretend reading be contributing to their acquisition of bi-dialectical repertoires?

In order to answer that question, of course, one would need to record, transcribe and analyze a good deal of classroom conversation. In particular, it would be necessary to compare the syntactic and phonological features used by particular children in their everyday conversations with the syntactic and phonological features they used in pretend reading situations.

Since our research did not focus on the linguistic content of classroom conversation, we are in no position to form a judgment. Our observations, however, do raise some provocative questions concerning the role of pretend reading in the children's linguistic development. Hopefully, future studies can explore the issue at length.

Concluding Remarks

In light of the complexities it involves, pretend reading might be considered a useful exercise for developing linguistic skills. But does it play a role in the learning to read process?

The answer to that question is likely to depend on one's view of the nature of reading. If one regards reading primarily as a decoding process, then pretend reading might be considered useful only to the extent that "memory reading" of very familiar stories might contribute to a child's sight vocabulary.

If, on the other hand, one subscribes to the "psycholinguistic guessing game" view of reading (Goodman, 1976), then pretend reading might be regarded as useful preparation for later, mature reading.

In Goodman's view, mature reading is dependent on three cue sustems: grapho-phonic cues, syntactic cues, and semantic cues. Fluent readers, in other words, make use of much more than decoding skill to help them extract meaning from a text. They also rely on knowledge of sentence structure, and on previous knowledge of the subject being discussed. Both kinds of awareness help them predict what is written next, and in the psycholinguistic guessing game of reading, it is the ability to anticipate what is coming next that makes the difference. The greater the ability to predict, the more likely a reader is to comprehend the whole of what is written, and to do so while skipping a portion of the graphic cues.

Viewed in the context of the psycholinguistic guessing game interpretation of reading, we suggest that pretend reading plays an important role in the overall development of effective reading behaviors. Where it exists, it might be considered the initial stage in learning to read - a stage in which grapho-phonic cues are ignored, while syntactic and semantic cues are used (the latter with the aid of illustrations). The next stage - the stage of early decoding - can be characterized as a time when the very cue systems that had been developed in pretend reading are temporarily abandoned. For the time being, the flow of the story takes a backseat to the struggle of unlocking the sound-symbol code. The effort to decode is all-encompassing.

In time, however, the imbalance corrects itself. As decoding skills become more automatic, syntactic and semantic cues once again surface as important. It is at this point - when the three major cue systems are integrated - that previous practice with pretend reading seems likely to stand the reader in good stead. At this point, an earlier developed facility for producing "book talk" should increase the likelihood that a reader can make efficient predictions based on syntactic and semantic cues.

If one accepts the psycholinguistic guessing game notion, then one can argue that the efforts of pretend readers to produce "book talk" serve as a kind of practice for the predicting process which occurs in mature reading; and if this is true, pretend reading can be considered excellent training in "reading comprehension."

PRINTING

Children in the "literate environment" kindergartens were writers as well as readers. They would often become so absorbed when printing that they would stick with it for 30-45 minutes at a stretch. In mid-January Mrs. B. commented that "the printing is so spontaneous, it keeps going."

While the motivation to print appeared to emanate from the children themselves, the program provided the context which primed that motivation. To maintain their enthusiasm, circumstances had to be right.

For one thing, the teachers needed to maintain an interesting supply of print models for the children to copy if they wished.

In May, for example, when Mrs. B. found her children were not printing as much as they had previously, she started making rebus cards, quickly sketching crude pictures to accompany words the children dictated to her. She also made rebus cards that tied into class experiences - for example, printing the names of animals they had seen on their class trip to the zoo. The addition of these rebus cards to the arsenal of items the children could copy from was apparently enough to fire up the children's writing once again.

The key to it all, though, was the principle of choice. The researchers observed that so long as the children were making the decisions regarding what to print, their printing retained a spontaneous flavor, and sustained itself. If the teacher made those decisions, however, the printing lost its zest.

The point was made by something that happened in Mrs. W.'s kindergarten. Both researchers noticed that her children's enthusiasm for printing flagged considerably second semester. The problem, they came to believe, was that Mrs. W. had adopted the tactic of telling her children what to print. When they entered the room in the morning she would have a message or list of words for them to copy. The children would, indeed, copy what she wanted them to copy, but that was all they would print. They wouldn't go on to attempt their own messages, or to copy other things of their own choosing. They had lost their incentive

to print it seemed, because they had gotten out of the habit of making their own decisions about what to print.

The element of choice,then, was critical to the success of the printing component.

The Path of Progress

Although the children in the "literate environment" kindergartens received guidance from teachers and aides as they printed, they were not formally instructed. Most of the progress they made, therefore, was due to their own experimental efforts.

The question, of course, is did they make progress? If so, in what ways? And was there any perceptible pattern to the development of print behaviors across children in an entire class?

To answer those questions, the project director charted the month-by-month changes evident in the print artifacts produced by children in one class. Mrs. R.'s class was chosen, because more print samples had been collected for her children than for the children in the other two classes, and a larger collection, it was felt, would offer the opportunity for a more precise analysis. Then, too, the children in Mrs. R.'s class had spent the most class time on printing, both because they had started early in the school year, and because their full-day session afforded more frequent opportunities for printing. As a result, they displayed more progress than children in the other two classes, and the greater spectrum of changes made it easier to spot the course of development.

In most respects, our analysis of the "literate environment" children's print products coincides with Marie Clay's analysis of the print artifacts produced by 100 children during their entry year of schooling in New Zealand (1975). Certainly we agree with her summary conclusion that the direction of development progressed from gross approximations to increasingly refined forms.

There is one major point of difference, however. Clay contends that no sequence was evident in the children's print development: "The point of entry and the path of progress may be different for any two children." (p. 7) We, on the other hand, detected a sequence

evident in the first attempts a child made at certain tasks. In general, the progression went from shorter to longer units. Starting with the printing of individual latters positioned randomly on the page, a child tended to move on to printing letter strings; from creating letter strings to copying single words, then copying phrases and sentences.

It is true that the entry of a longer unit into a child's repertoire did not signal the demise of shorter units. A child could still be producing letter strings well after the time he was copying phrases and sentences, for example. Thus we can agree with Clay's statement that "The individual child's progress in mastering the complexity of the writing system seems to involve letters, words, and word groups all at one time." (p. 19) The point on which we differ, however, is that a specific sequence was evident in the chronological entry of new tasks into the repertoire.

Some of the other major patterns that emerged from our analysis are as follows.

- As practice with printing continued, the children tended to make progress on the following fronts:
  - ...letter formation
  - ...linear sequence of letters
  - ...correct direction of letters (letter reversals were common)
  - ...uniformity of letter size
  - ...spatial arrangement of words when copying phrases and sentences
  - ...consistent and appropriate use of upper and lower case letters
  - ...inclusion of a space between words

  There did not appear to be any particular order in which these concepts were acquired, although the inclusion of spaces between words did seem to be the last convention to be acquired - and, indeed, was not acquired by most of Mrs. R.'s kindergarteners, even by the end of the school year.

  It should also be noted that errors continued to intermingle with error-free forms well after the first signs that a particular convention had been mastered. Thus, reversals of a certain

letter might continue to be sprinkled throughout print samples in which that same letter was also printed correctly. Then, too, an occasional instance of mirror writing might crop up well after the time a child had appeared to master directionality.

- The children appeared to make use of several strategies in the course of achieving mastery, among them:

  ....repetition of items

  ....attempts to vary, or play with, certain aspects of print - such as letter size, spatial arrangement, etc.

  ....attempts to list, or inventory, what they knew (it was common, for example, to see children periodically printing the entire alphabet in sequence, as if reviewing it in their minds; later in the year, some of the children would list the words they could spell from memory).

- When children first started producing letter strings and copying words, they seemed more intent on the mechanics of printing than on the message. Some weeks later, however, they seemed to want what they printed to say something. At that point it was common to hear them 'read' (pretend read, that is) the letter strings they had created. Sometimes, too, they showed what they had printed to an adult and asked, "What does this say?" To the researchers this concern for the message conveyed by what they were printing indicated an awareness that print tracks sound; it further indicated a belief that print is, and should be, meaningful.

- An interest in producing cursive-like scribbling often surfaced at some point after a child started to copy words.

- The only children to produce their own messages using invented spelling, it seemed, were the most advanced children - that is, the children who were beginning to decode.

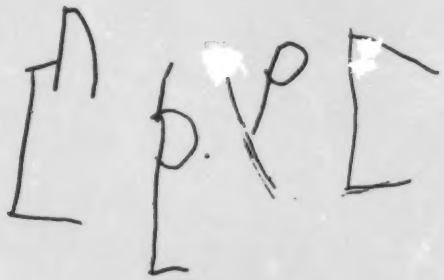
- Other than a few instances of invented spelling, the furtherest point most children reached in terms of writing independently was to print some words from memory (often words from their word banks).

Samples of Print Behaviors

The following print samples have been selected to illustrate some of the trends that were just discussed. (Note: all samples have been reduced to 65% of their original size.)

• For the least experienced children, the first attempts at printing are likely to show letter-like shapes (circles and lines) but not recognizeable letters. These approximations of letters are then followed by the real thing.

In this sample, Janea produced her first recognizeable letter, along with some letter-like shapes.



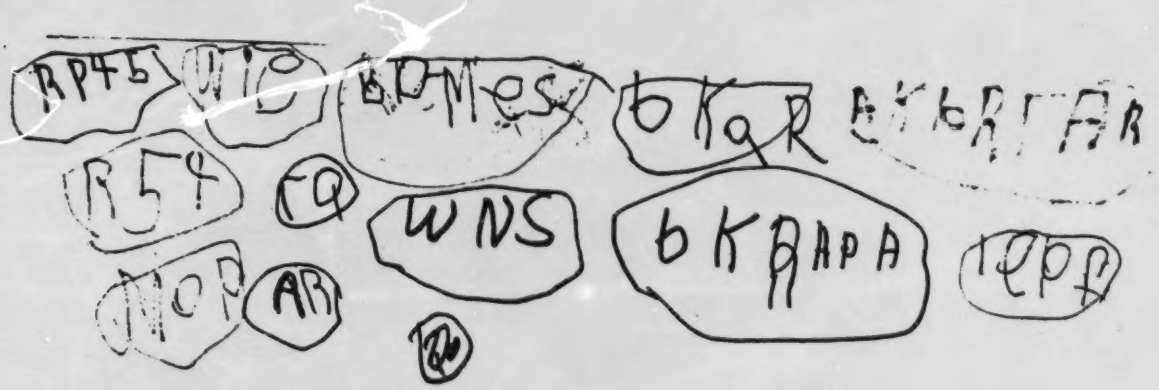
• In the early stage of producing letter forms, children tend to print letters in isolation, and place them randomly on the page - sideways, upside-down, any which way. As in this sample, letter size may vary, and letter reversals can be common.

The child who produced this page (Tamara, 10/17) told Mrs. R. this was her story about the nursery rhymes. Already she seemed to understand that letters are involved in telling stories.

• It is not long, generally, before letters printed in isolation are replaced by strings of letters.

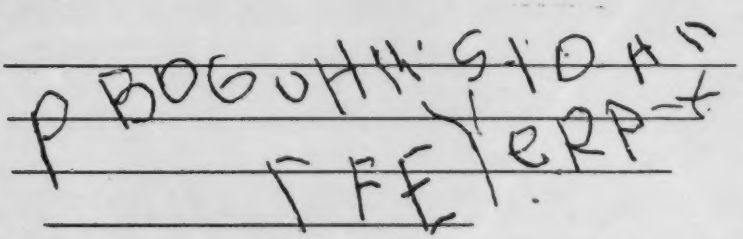
Since these letter strings are independent productions, alterations in their composition and length over time can reveal children's changing hypotheses about print and the make-up of words.

The following letter strings produced by Shkara in mid-October show a distinct attempt to create boundaries for her letter strings. When asked what her print said, she replied "I'm just writing words."

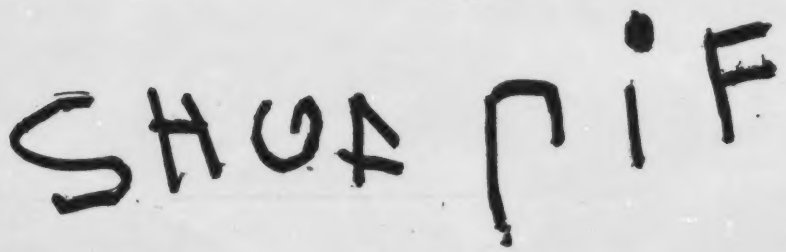


The next three samples were all produced by the same child, and suggest that his hypotheses about words underwent some changes during the year.

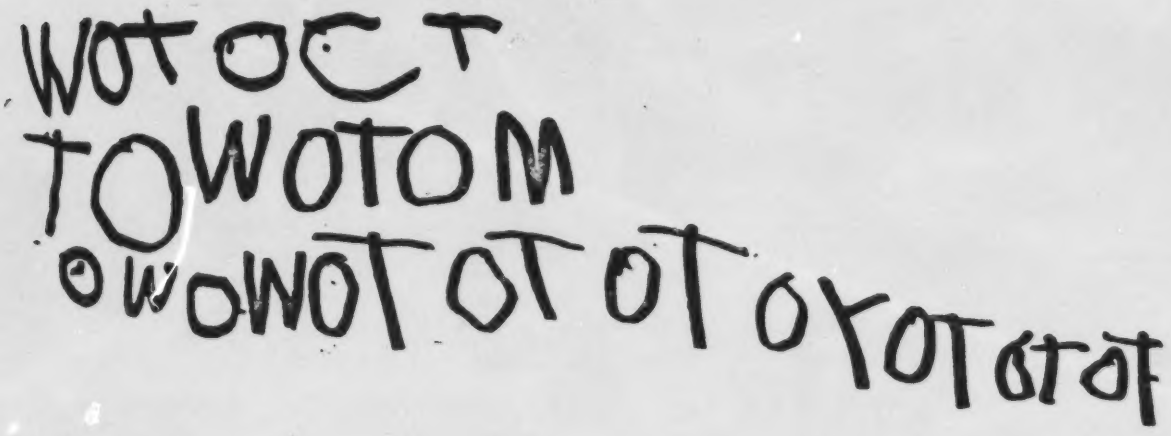
In this first sample (from early December), Roy produced a letter string in which each letter is followed by a different one, although some vowels are used again later in the string. Apparently he has developed the notion that a word is made up of different letters.



One month later, he produced a shorter letter string, and declared it to be "the word 'snake.'" His first letter was correct (by this time, Roy could focus on beginning sounds in words, and was aware of the 'ssss' sound), and the length of the letter string was fairly realistic.



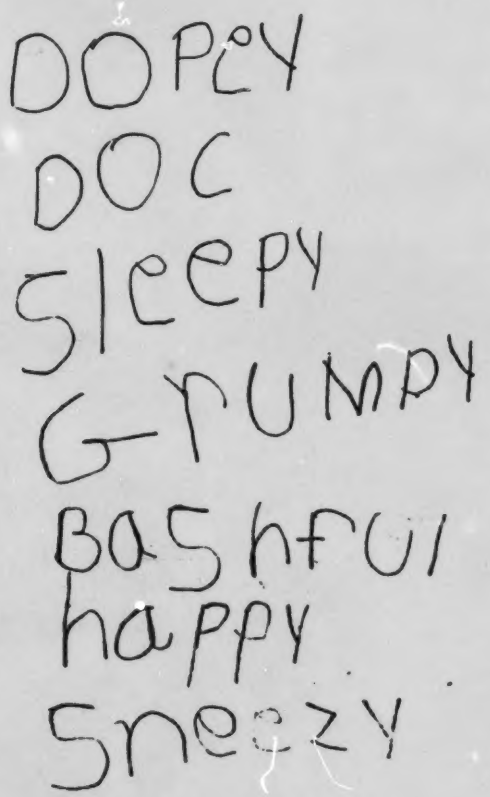
By May, four months later, his notion of a word seemed to have evolved still more. Now his letter strings showed the repetition of consonant/ vowel combinations. He was, in effect, creating syllable units, which perhaps reflected an emerging awareness of spelling patterns. Also, he was experimenting with the length of his "words."

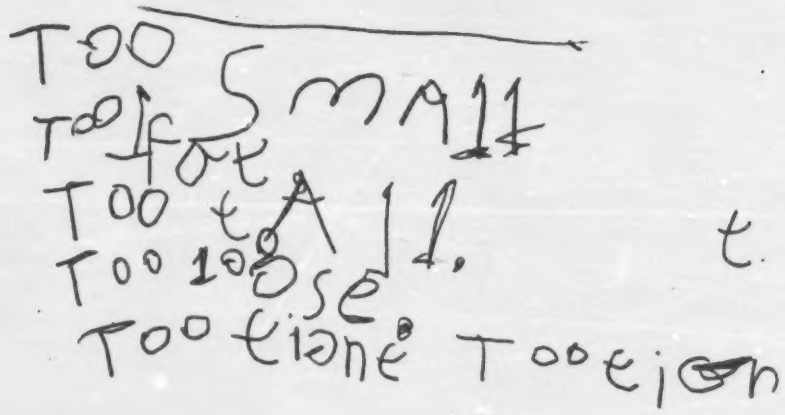


• After letter strings, the next thing a child is likely to add to his repertoire is the copying of single words. (The only other word he would have printed up until this time would have been his first name.)

This next sample was chosen to illustrate how tricky initial attempts to copy can prove. This was Bianca's first attempt to copy a word - "Mother" - on November 6th. The 'e' is reversed, and she is not yet in control of directionality.

Progress occurs, however. Just four months later, Bianca's copying of the 7 dwarves' names is quite legible, and shows mastery of the directional principle.





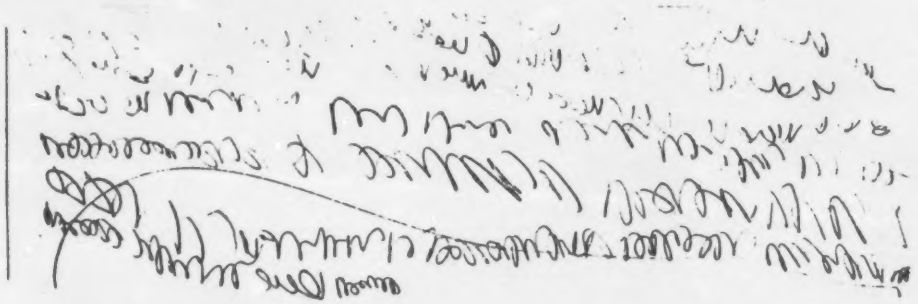
• After copying single words, the next step is to copy phrases.

This sample, which Erika produced in March, shows her copying phrases from the book Old Hat, New Hat. Like many of the other children at this stage, she still has not mastered several of the print conventions. Her letters are not all of uniform size; one letter is reversed ('G'); she mixes upper and lower case letters; and when she reaches the edge of the paper before completing the word "tight," she places the 't' in a position where it floats above the rest of the word. She does, however, leave some space between most of the words - a print behavior that generally does not emerge until after the other conventions have been brought under control.

• Often, after the children have begun to copy words, they become interested in producing strings of cursive-like writing.

The following two samples show Tiffany's experimentation with mock cursive. This first sample shows the consecutive horizontal lines of a text.

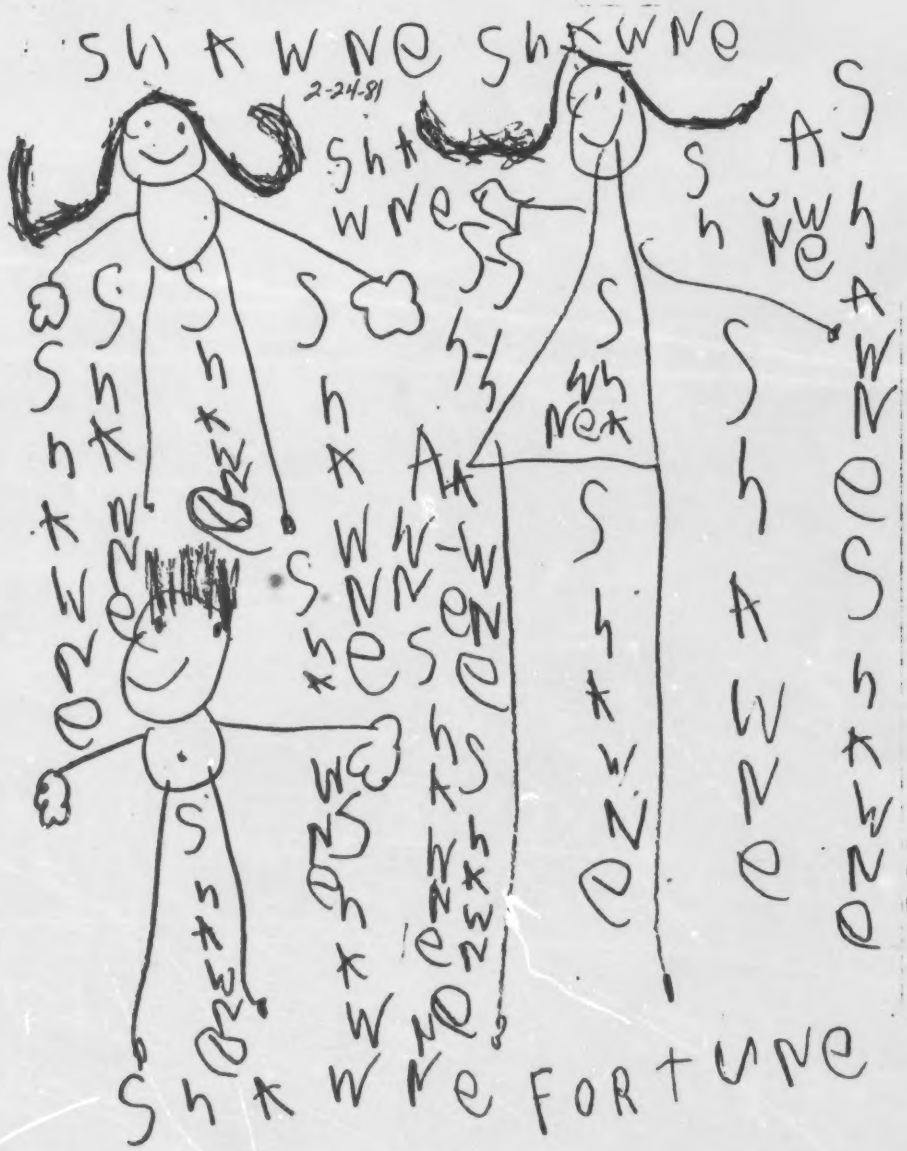
When asked what she was doing, Tiffany "read" her mock cursive: "Santa Claus had a holy night. And Miss Santa Claus was cooking some hay. And all my enemies were fighting and fighting on Christmas." Clearly she wanted what she had produced to have meaning.



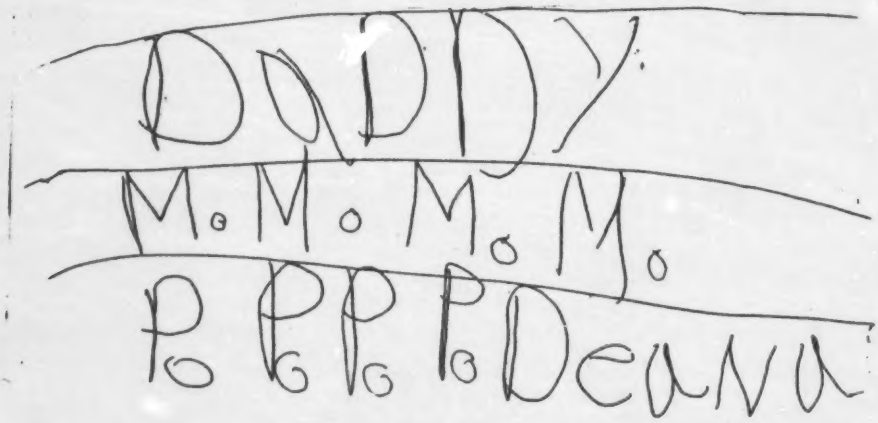
Two months later, Tiffany produced another sample of mock cursive. This time, however, the spacing was different. The cursive-like strings of writing were word length, and positioned in a vertical column, like a word list.

• The next three samples are included to illustrate some different ways in which children make use of repetition when experimenting with various aspects of print.

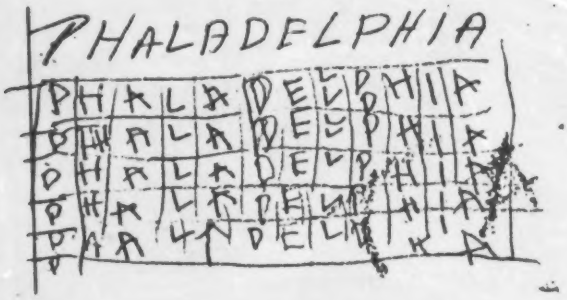
In this first sample, Shawne (2/24) plays with spatial arrangement. She repeatedly prints her name, mostly in vertical columns which blend artfully with her drawing. At one point she uses the letters of her name to fill in one of the girls' skirts.



This sample was produced mid-year by Ellissa, who was one of the children who would reach the decoding stage by year's end. Here she stops in the middle of producing a word list (not shown) to play with some letter combinations.



This last sample, produced by Tiffany in April (the same child who authored the mock cursive samples) shows an interesting use of repetition, spatial arrangement, and the creation of boundaries - in this case for each letter.

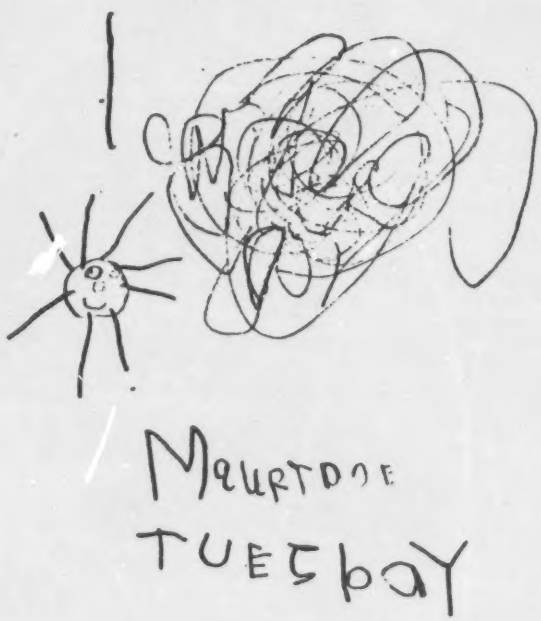


The Case of Maurice

The foregoing sprinkling of print samples offers a kind of composite sketch of the children's print development. What is missing, however, is the sense of a single child's progress. To provide that perspective, we present the following sampling of Maurice's print products.

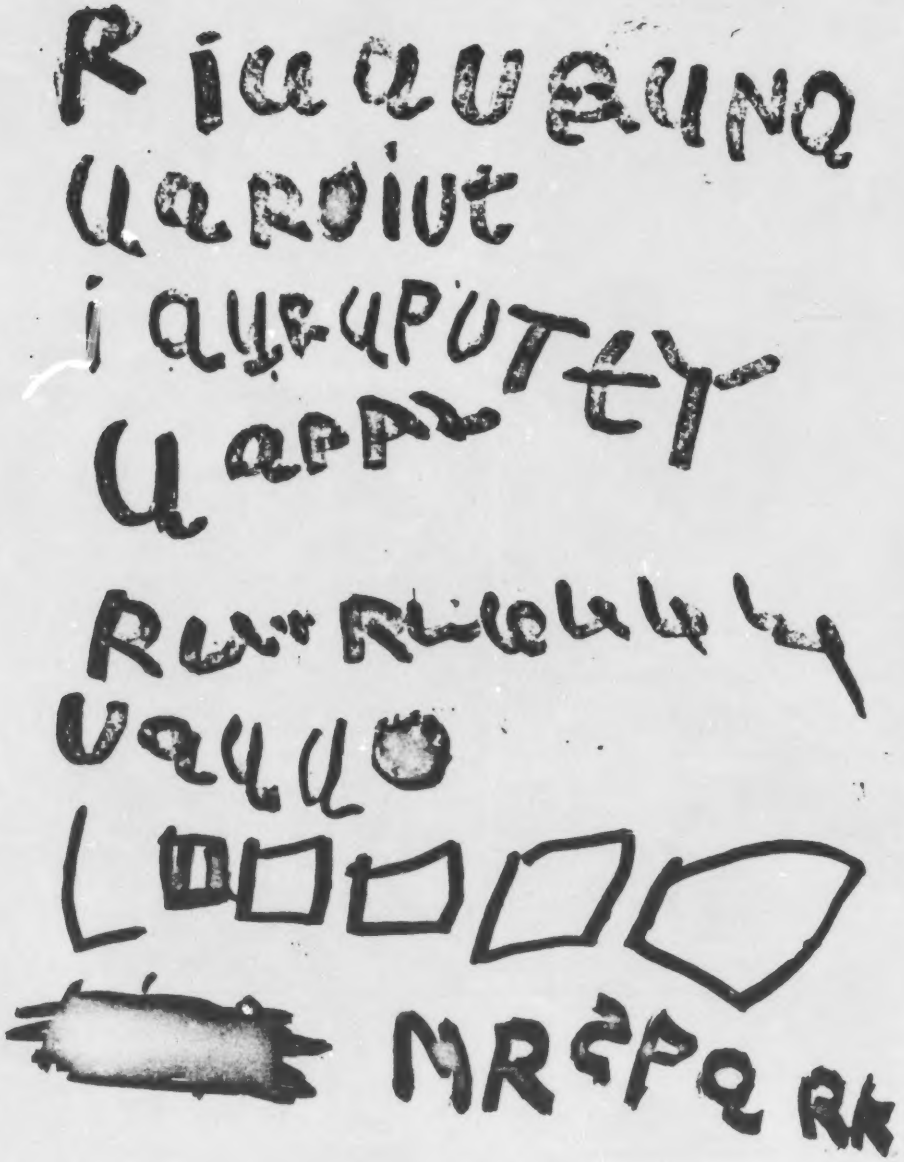
In several respects, Maurice is representative of many of the children in the study. While his low scores on standardized tests perhaps reflected a lack of background knowledge, they did not take into account his quickness of mind and eagerness to learn. High-spirited and disruptive if bored, he may have presented a behavior problem in another kind of classroom, but in Mrs. R.'s kindergarten, there was almost always an activity to absorb him. He loved to pretend read and print. He worked diligently at reading Syllabary books, and by the end of the year was attacking the phonics workbook. His sight word recognition grew during the year, prompted especially by attention to his growing collection of word bank cards. While he did not reach the point of independently decoding by the end of the year, he made good progress towards that point. He was, in every sense, "ready to read."

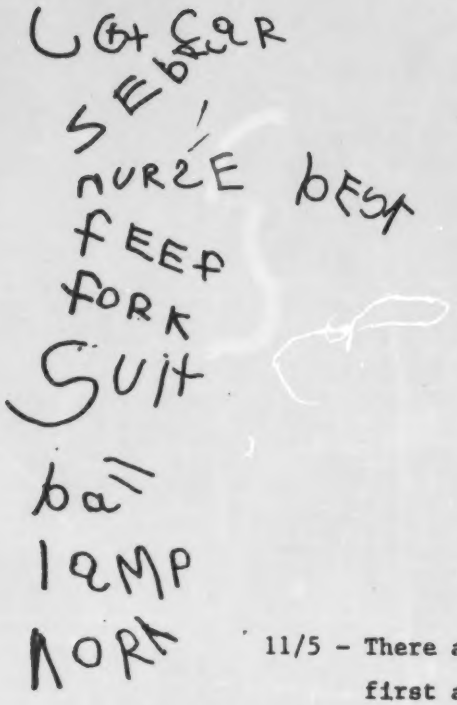
The following samples depict some of the points along the way in his print development.



9/30 - This is Maurice's first printing for the school year. Already he can copy, which is more than some of the other children can do at beginning of the year. But notice the problem he has printing his name, and notice the letter reversals in "Tuesday."

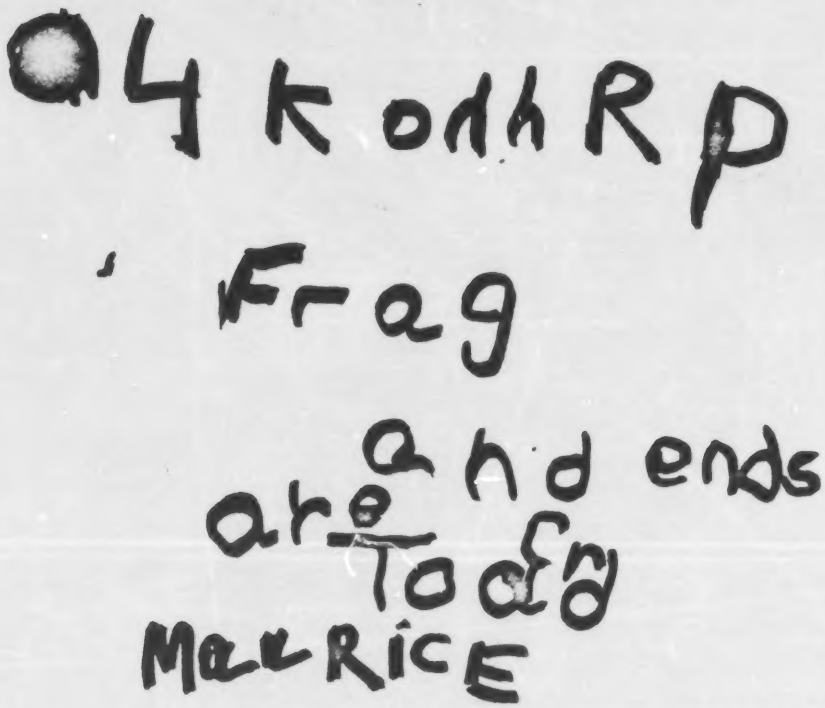
10/11 - In this sample Maurice produces a page of letter strings. Notice the repetition of 'u's, and the letter reversals.



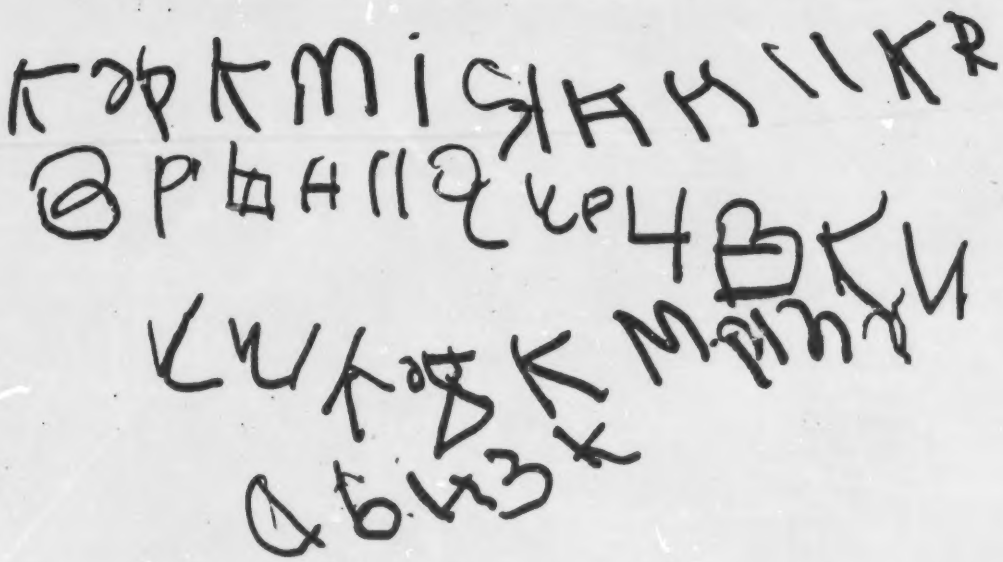


10/20 - Maurice copies words from rebus cards: notice how the 's' is reversed once, but printed correctly three times.

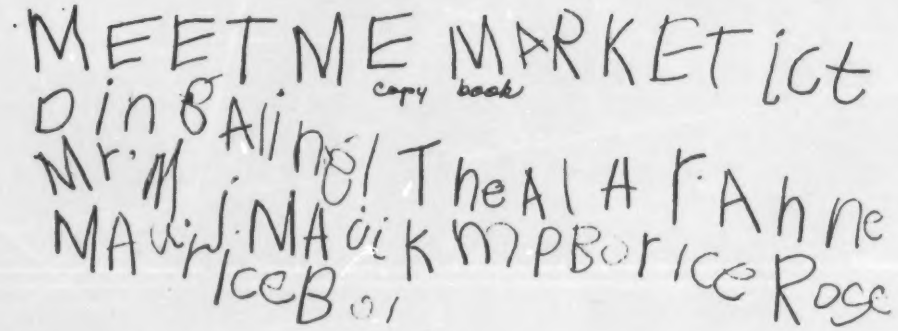
11/5 - There are spacing problems in this first attempt to copy a book title (Frog and Toad Are Friends). Notice, though, that Maurice is printing his name correctly by this time.



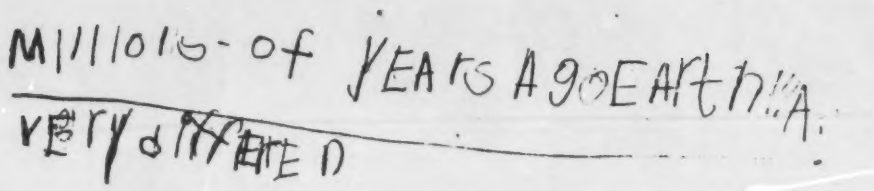
11/23 - Maurice writes this message to a crossing guard, and "reads" it as follows: "Dear, Happy to see you again. Come back to me soon."



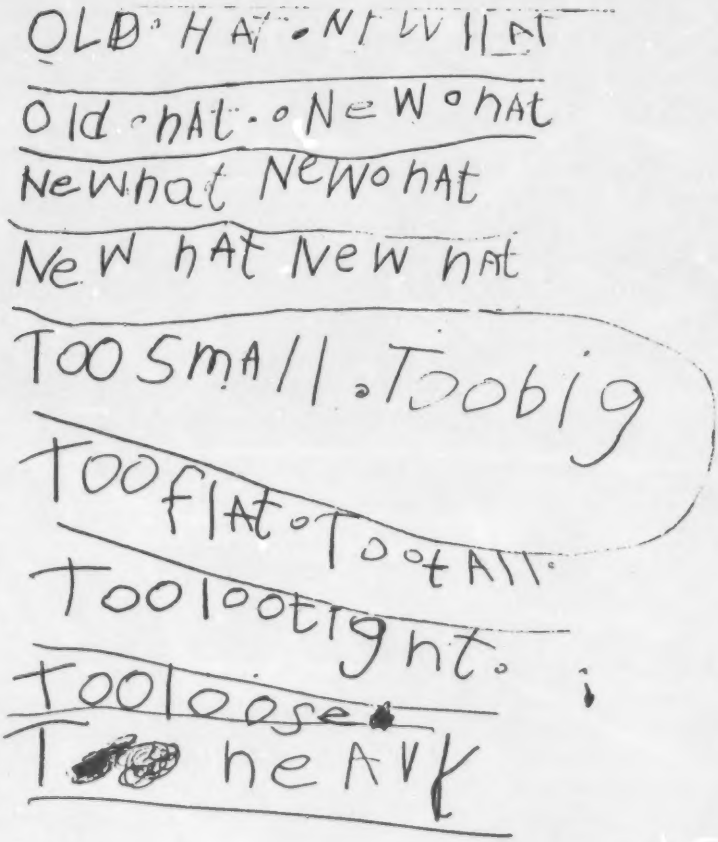
2/2 - This is the first print sample in which Maurice tries to copy phrases from a book. He fills only the very top of the page, and leaves the rest blank.



2/19 - Just two and a half weeks later, Maurice copies this sentence from a book, and it is legible.



3/10 - In this sample, Maurice copies phrases from Old Hat, New Hat: notice the • between many of the words, and the drawing of lines under the print, both of which indicate an awareness of boundaries.


OLD • HAT • NEW HAT
old • hat • • new • hat
New hat New • hat
New hat New hat
Too small • Too big
Too flat • Too tall
Too loot tight.
Too loose
Too heavy

B
Ball
Baseball
Playball!
Ballone.
Balltw
Ballthree
Ballfour
walk!

3/24 -

In the sample to the left, Maurice copies the chant on page one of the phonics workbook. He shows good control over letter size, directionality and spatial arrangement.

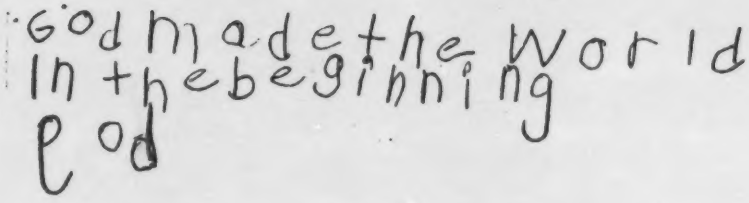
5/21 -

In the sample below, he copies a paragraph, using a magic marker and covering the whole page. There are no spaces between words, but notice how many of the print conventions he has mastered over the course of the year.

Hemadetrees
andflowers.
Hemadethesun
themoon
andthestars
Hemadebirds
andfishes

June - Maurice is still copying sentences from books. Generally he uses a pencil for this purpose, so that, as in this sample, his printing is much smaller than in the previous sample. He tends to fill the top of the page, and leave the rest blank - as if the effort of copying this much is all he can handle.

The reversed 'g' in 'god' illustrates a point made earlier: even when children progress to the point of producing mostly error-free samples, they continue to show occasional lapses.



THE EMERGENCE OF PRINT-RELATED INSIGHTS AND SKILLS

As children in the "literate environment" kindergartens continued to pretend read and print, as they heard their teachers emphasize the different letter sounds in words, as they participated in metalinguistic awareness exercises, read Syllabary books, collected word bank cards and started using a Phonics Workbook - as they did all this, they gradually acquired a variety of print-related insights and skills.

Since our research design did not call for pre- and post-testing the children in various print-related areas, our assessment of their progress is based on observation and teacher comments.

Book Handling

Although it sometimes happened that children started at the back of the book and progressed towards the front during a pretend reading, it was rare.

Awareness that Print Tracks Sound

As Rozin and Gleitman (1977) point out, there are three preceptual-conceptual problems which confront the beginning reader, and the first of these is "the phoneticization problem" - i.e., the understanding that print tracks sound.

Most of the children, it seemed to the researchers, developed an awareness that print is where you look for messages. As Roy once explained to a researcher, while pointing to some print, "It tells you the story."

A behavior that clearly indicated the children's awareness of the role print played was their tendency to point to the printed text while pretend reading (even though they were cueing from the illustrations).

Take the example of Heather, who was pretend reading to Putnam during a February 20th observation in Mrs. R.'s class. When Putnam asked her to repeat something she had just said, the child promptly pointed to some words in the print section and repeated the line.

Even more telling were the times when children pretend read pages with just print, and no pictures. A very similar phenomenon occurred when children "read" the letter strings they printed.

Directional Principles

After the beginning of the year, it was rare to see a child running his finger under print in a right to left direction while pretend reading. It was also rare after a few weeks to see a child printing from right to left.

Along with grasping the left-right orientation of print, most of the children seemed also to grasp the fact that reading proceeds from the top of the page to the bottom. Indeed, some of the more advanced children would, when pretend reading, sweep their fingers under consecutive lines of print in the proper top-down direction.

The Use of Print-Related Terminology

The way in which children used various reading-related terms was a very minor focus of our study, and we lack the kind of precise information that appropriate tests can yield. At the same time, our observations did capture some of the ways in which children used these terms in everyday situations.

- Use of the term "read"

Essentially the children seemed to be using the term in two different ways: 1) to indicate pretend reading, and 2) to indicate real reading, or decoding.

When used in the former sense, "reading" was synonymous with looking at a book and telling the story. This was a broad view of reading, in which the essential point was to draw meaning from a book (illustrations included). In contrast, children who entered the early stages of decoding, made a much finer distinction when using the term "read." At this point, their concept incorporated the knowledge that reading calls for a specific technology, which pretend reading does not require. Kinzya implied what the difference was when she looked at Peter Rabbit and said, "I want to read it for real."

Distinctions in the use of the term were not clearcut, however. Not only did the children who were most advanced in terms of print awareness say "I can't read," some of the children who were least advanced also said the same thing. In their case, it was not clear whether they were indicating some understanding of the decoding process,

which they knew they could not perform, or whether some vaguer understanding was involved.

One final notation: on several occasions children were observed to boast that they could read with their "eyes closed". On one occasion, Marlon, in Mrs. W.'s class, had just finished reading the names of the days of the week. The principal was looking on, and everyone was impressed by his reading, since these words had never been shown to him in class before. Aware of the sensation he was creating, Marlon seemed to want to go one step further - which was when he announced he would read with his eyes closed.

In another instance Maurice, in Mrs. R.'s class, was reading word bank cards to a researcher. Towards the end of the reading, he announced, "I can close my eyes and read." Apparently he was aware of the impossibility of this, however, for he did actually proceed to read word bank cards that Nnieka held up for him - which meant he must have been slitting his eyes open just enough to see.

- Use of the term "word"

A child like Kyle, who was not very knowledgeable about print, tended to confuse the terms "letter" and "word." On the same day in May, he told the researcher, "I don't know the words," referring to a book he was looking at; but then, when he was stacking letters later in the day, he announced, "These my words."

In general, though, it appeared that many of the children used the term "word" correctly. It should be remembered, however, that they were often aided by contextual clues. When reading word bank cards, for example, they would invariably say, "I'm going to read my words," but the very term "word bank" was an obvious clue.

Without hearing the children use a term in a variety of contexts - including a testing situation - it is difficult to judge how formed their underlying notions of a word were.

Often the most concrete reflection of the children's understanding of words came when they were printing. Judging from their print products it seemed many were developing the notion that words are comprised of a number of letters. Consider Shkara's print sample (p.147), where she circled strings of 3 to 6 letters (with a few numbers thrown in), and explained "I'm just writing words." Or the time when Roy printed

a long string of letters on the chalkboard and announced with pride: "I made a very long word."

Then, too, the manner in which some children pointed to each separate word in a line of print as they were pretend reading indicated they were developing a sense of word boundaries.

In the end, our observations were not informative enough to draw firm conclusions. What was gained, however, was the impression that most of the children used terms like "read," "word" and "letter" appropriately much of the time (after the beginning of the school year, that is). The extent to which correct usage was prompted by the familiar context of reading and writing acts they performed every day is not known. Nor is it known to what extent appropriate use of reading-related terms reflected a true understanding of letter and word units.

- Use of the term "cursive"

"I can write cursive" was a fairly common statement, and usually it was said as a child made cursive-like scrawls on paper (see p. for print samples of mock cursive). Not everyone understood the term, however. In Mrs. R.'s class Maurice became quite upset when he heard a friend announce she was going to write cursive. Apparently he thought she was going to curse. The matter was cleared up only after Mrs. R. held a class discussion to explain the meaning of the word.

Notion of Authorship

Kindergarteners' notions of who writes books were not something the researchers gave any thought to - until two children in Mrs. R.'s class brought up the matter while dictating pretend readings of Peter Rabbit.

Maurice had just ended his reading by saying "The End," when he happened to turn to the title page. Glancing at the author's by-line, he added, "by Peter Rabbit."

Frances, a child who was beginning to decode and was quite competent linguistically, apparently held a similar notion that the characters in books are their authors. In the middle of dictating her reading to Putnam, she asked, "Did Mr. McGregor make this book?" After being shown Beatrix Potter's by-line, she commented: "Oh, I thought Mr. McGregor wrote the book and put himself in it."

Letter Knowledge

Along with their interest in pretend reading and printing, children in the "literate environment" kindergartens were quite interested in letters. They enjoyed looking at alphabet books; they sang the ABC song to themselves; they printed letters and traced them in coffee grounds; they arranged letters on magnetic letter boards; they played with letters made of various materials (wood, plastic, foam rubber, etc.); and they formed letters out of clay.

Although there was rarely a formal "lesson" on letter names, most of the children in the "literate environment" kindergartens gradually acquired a knowledge of letter names. At year's end, Mrs. R. reported that only 3 children in her class did not know all the letter names; Mrs. W. reported 5 in her class.

In addition to making the point that children in the "literate environment" kindergartens learned letter names without formal instruction, we wish to make another point: acquisition of letter name knowledge did not precede acquisition of other kinds of print-related skills. Rather, letter names were absorbed simultaneously with other kinds of knowledge, and sometimes afterwards - to the consternation of the teachers. As Mrs. W. commented in mid-December, it seemed unusual that some of her children would know sight words, but not know the names of letters.

This same pattern, however, was noted in a recent study (Hiebert, 1981), which involved 60 three, four and five-year-olds attending a preschool and daycare center in Madison, Wisconsin. After testing the children in a variety of areas relating to letter and word discrimination, sound matching, sound blending, letter naming, and the concept of reading, Hiebert performed a factor analysis of the children's scores in these areas, and assessed the growth pattern which emerged across age groups.

Overall, she found that reading-related skills and concepts were acquired in a kind of "unidimensional" fashion, not "in a distinguishable sequence." Letter naming, it seemed, was just one of those skills. "Moreover, letter naming was not the first aspect of print awareness to emerge." (p. 256)

Our observational findings, then, tend to confirm Hiebert's statistical findings.

Letter-Sound Focus

Although children often focussed on letter sounds at the same time they were learning letter names, it did seem that letter sounds were more difficult to master. A common pattern was for children to know all their letter names, but only a few "sounds" - generally the consonant sounds, which are easier than the vowel sounds.

There were, of course, a variety of levels at which children could focus on letter sounds. The easiest level, it seemed, involved the association of a sound with a letter - for example, "puh" with "p." Another of the easier levels involved identifying the beginning sound in a word, as Roy did when he commented that "Sun begins with 'ssss'" (December 4th observation, Mrs. R.'s class).

The most difficult level, it seemed, involved the isolation and production of all the various sounds in a word - a procedure which might be used when spelling a new word.

Perhaps the apparent difficulty of this task had something to do with the fact that so few children spontaneously produced invented spellings. Or did it?

Linguist Carol Chomsky (1979) advocates that before children attempt to read, they attempt to spell words for themselves, using letter names and a few letter sounds. The implication is that invented spellings are not particularly difficult.

Being aware of Chomsky's position, it was something of a surprise to Putnam that the children in this study did not produce more invented spellings, but they did not. The only children to do so, it seemed, were those who were already in the beginning stages of decoding.

To some extent, this may have been a function of what was asked of the children. This was suggested by an incident that followed a teachers' meeting in February, in which Putnam urged the teachers to encourage invented spelling. Shortly after that, Mrs. B. offered a reward to her children: anyone who wrote his own message without her help, she said, would get some cheese curls. The result was a burst of invented spellings. When the rewards ceased, though, so did the invented spelling.

What this incident suggested, of course, was the the children could produce invented spellings if they wanted to. Without some special

incentive, however, they generally chose not to.

Spelling

Although not much interested in inventing their own spellings, many of the children were interested in memorizing conventional spellings. The more advanced a child was with print in general, the more likely she was to have developed a repertoire of words she could spell from memory.

In some cases, the children appeared to have learned to spell certain words at home. But the general emphasis placed on letters and letter sounds in the classroom must have contributed as well.

The following are some examples of children spelling.

Mrs. B.'s class, Dec. 15 -
When Glendia asked the researcher to write "Snowman" for her, Nakia spelled 'm-a-n' for the ending. Nakia then told Putnam: "I know how to spell. . . my Daddy taught me." She then proceeded to spell 'school' correctly.

Mrs. R.'s class, Jan. 26 -
As Ellissa finished echo reading Someone Is Eatin the Sun with Mrs. B., she announced to the researcher: "I can spell 'sun.' And she did.

Mrs. W.'s class, April 27 -
Mrs. W. looked at Takeya's book of animals and asked, "How do you spell 'fox'?"
Keith: "F-O-X"

Mrs. R.'s class, May 15 -
As Frances was working on the "Play Ball" chant in her Phonics Workbook, she said "I bet I can spell 'ball' with my eyes closed" and she did.

Mrs. R.'s class, May 15 -
Roy: "Maurice, I'm going to tell you bout your story."
Nnieka: "What's your story?"
Maurice: "Snow White. You spell it S-N-O-W W-H-I-T-E.
Nnieka prints this as Maurice spells it.
Roy: "Maurice, tell me about your story."
Nnieka shows her print paper to them: "See, it's like this." And she spells 'Snow White.' Pointing to a word in the Snow White book, she asks: "What's this spell?"

Oral Language Play

According to Durkin (1964), some early readers "showed interest in playing with oral language and with sounds." (p. 6)

The same was true for some of the children in the "literate environment" kindergartens. During an April 22nd observation in Mrs. R.'s class, for example, Heather pulled Putnam over to the desk where she had been printing. She proceeded to "read" the following string of letters - m R C E F i Z M j o r I k - as "wack lack fack fake lake wake cape way low tape tape wape tape loop roop subaru, that's not scoobedoo."

Another example occurred when Putnam was writing down the pretend readings of Peter Rabbit for several children in Mrs. R.'s class. After Ellissa had finished her first reading, she begged to read the story again - only this time "funny." Putnam obliged by taping the following rendition of the classic tale. Ellissa's humor, it will be noted, is based not only on some outrageous semantic alterations, but also on sound substitutions and nonsense words. She also plays occasionally with the rhythm of word repetition, and changes in vocal pitch.

> Once upon a time, in a up fir tree down in the very gloats grass, there lived four little bunnies named Flopsy, Popsy and Pottontail. They lived in a big pringprong tree. The mother said, "Now you skip along my darlings and don't - and get into mischief." And go in Mr. McGregor's garden, but don't run down the lane and don't go to pick no blackberries git all his stuff from out his cucumber frame. "Sing, sing, sing" she went. She said, "sing along and sing along and sing along. Follow Peter Rabbit wherever he goes. Tell me when you get back." They didn' listen. They were - Flopsy, Mopsy and Cottontail, who were naughty little bunnies went to pick some blackberries - ooh - their mother said not to. But Peter Rabbit who was very - a good little rabbit, went into Mr. McGregor's garden to pick some parsley and stuff. Peter Rabbit ate some fresh flerryflosh and den he went again lookin for some cucumber frames - to eat. "Hey, what's the matter?" Feelin rather hungrier he went to look for some Mr. McGregors to eat. He ate some plants that Mr. McGregor had just got finished making out of his straw and house and all the stuff like classrooms, and toys, and rugs, and doors, and chairs, and deskes, and tape recorders, and everything in the whole wide world. He got up on his hands and knees and start crawling, saying "Stop you thief! Stop you thief - ran." Cake - rake - he called out, "Stop thief! Stop, stop, stop, stop, stop" (the "stops" said in sing-song voice, with up and down pitch) He lost one a his blackberries in the foofumber frame. It came off again. He lost his other shoe in the gooseberry det - det. In the gooseberry din-din. He lost one a his shoes in a clock-clock-clock-clock, in a clock-clerk-clerk-clock. He went into a clique-clock-clan. Mr. McGregor thought he was in a damp-damp-damp. He ran, upsetting Mr. McGregor's foot. He felt very tired of running. He saw this wildcat - he saw this scratch, scratch, bratch, bratch and he saw the cucumber frame; he saw everything in the whole wide world. He looked back at everything before he went

home. Mr. McGregor found everything he lost and laying down parshley, one scoop of chamoile tea, Flopsy, Mopsy, and Cottontail had to go to bed. The End.

Whether the "literate environment" curriculum had anything to do with catalyzing this kind of word play is not known. It is possible that metalinguistic awareness activities fuelled the interest in playing with sounds, but it is also possible these children would have engaged in this kind of play regardless of curricular approach (although they might not have done so during class time).

Sight Word Acquisition

A number of activities in the "literate environment" approach lent themselves to the recognition of sight words - not because the words were "taught," but because their repetition in familiar and enjoyable print settings led quite naturally to the children remembering them. The overall emphasis on print, of course, must have helped.

On occasion, children could point to specific words in a text they had memorized (like Bears In The Night) and say what they were. Repetition of certain words - like "can" and "be" - in the Syllabary books led to recognition of the same words when they occurred in other contexts, for example in Phonics Workbook chants. The children also began to recognize some of the words on rebus cards they used for printing. Mrs. B. reported, for example, that after a week of copying the names of animals they had seen at the zoo, many of her children could read these words without the aid of a picture clue.

Many children also came to recognize their classmates' names. Note the following incident from a January 26th observation in Mrs. R.'s room, when Maurice surprises the researcher with his response.

> Putnam asked Maurice to come over to the bulletin board where some words like "Mat" and "Cat" were posted in large print. Actually each letter in these words had been outlined by a child, using macaroni-shaped pieces of white packing material. In the corner of each construction paper was the personal signature of the child who made the letter.
>
> "What does this say?" asked Putnam, pointing to one of the large words (she thought).
>
> Maurice replied with the name of a classmate - Sure enough, it was the name printed in small letters in the corner of the construction paper where Putnam really had been pointing.

Surprised by the response, Putnam asked Maurice what some of the other children's names were. He read "Tiffany" and several other names accurately, despite the fact that the children's printing was not the most legible. He could not read the large words, like "Cat" and "Mat," however. Perhaps that was because those words didn't have the same personal meaning for him as his friends' names.

(Note: Mrs. R. later told Putnam they had spent a lot of time in class rearranging and reading the syllables in children's names - as part of a metalinguistic awareness activity.)

Decoding Skills

A few children - but only a relative few - reached the point where they could "break the code" and read simple words they had not seen before. This kind of progress was most noticeable in Mrs. R.'s class, where the Phonics Workbook had been introduced in March, and where children had experienced twice as much class time as children in Mrs. B.'s and Mrs. W.'s half-day sessions.

SOME HALLMARKS OF THE LEARNING PROCESS

The learning process in the "literate environment" classes was, to a great extent, directed by the children themselves. In an atmosphere where they were encouraged to make choices about how they would engage in reading and writing, they developed their own tasks, set their own pace, and invoked their own learning strategies.

Some of the more important aspects of this learning process will be discussed on the next few pages.

Fluctuations in Interest

After six years of studying the process by which "early readers" had learned to read, Durkin (1964) made the following observation:

> ...the preschool children who were interested in reading, or in writing, were not necessarily interested every day. On some days, according to their parents, the children would be occupied for an hour or even longer with the kinds of questioning and with the kinds of pencil and paper activities that can lead to skill in both reading and writing. On other days the interests of the children were very different, and might go in the direction of playing house or in building with blocks.
>
> (p. 6)

A similar pattern of fluctuating interest in reading and writing tasks was observed among the "literate environment" kindergarteners. Some days a child might pretend read 5 or more books, while on another day not pretend read at all. The same would hold true for printing. Some children went through a phase where they would "print, print, print", as Mrs. B. put it. Then their interest might wane for a time, as reading or other pursuits took priority.

Repetition

> There is an enormous amount of repetition and practice in young children's mastery activity....
> (Sutton-Smith & Sutton-Smith, 1974, p. 157)

When children wish to learn something, they willingly spend time practicing it. In the "literate environment" kindergartens, this was evident in the children's engagement with books and print. When given

the opportunity, they chose to repeat basic literacy experiences over and over again.

They wanted storyreadings of their favorite books repeated. They wanted to pretend read those same books for themselves over and over. They begged to dramatize certain stories - like Bears In The Night - several times in a row. They printed the same letters again and again until they were mastered. They read the same word bank cards over and over.

The eagerness with which these children repeated literacy routines so many times, of their own volition, raises an interesting question. Why is it that so many teachers rely on worksheets and skill-drill lessons to insure their students practice desired skills?

Print-Related Questions

As was the case with "early readers", once children were exposed to storyreadings and teachers' comments about letters and sounds, and especially when they began to experiment with printing, they began to ask questions which reflected an interest in the mechanics of reading.

The following are some examples of questions from our field notes:

Mrs. R.'s class, Dec. 4 -
Tamara asks the researcher (Putnam): "Can you make me a lower case 'm'?"

Mrs. R.'s class, Feb. 4
Frances asks the researcher (Watkins): "What is the letter that makes the 'thu' 'thu' sound?"

Mrs. R.'s class, Feb. 20 -
Heather copies letters from a rotating letter log, and asks Putnam what she has spelled. (She asks this several times of Putnam, after rolling different letter combinations). Heather then takes her print paper over to Mrs. R., and asks her, "What does this spell?"

Mrs. W.'s class, Jan. 20 -
Stephanie asks Mrs. W. to write "the three little piggies" on the board after the class has dramatized that story.

Mrs. B.'s class, May 7 -
Kimberly asks Mrs. B., "How do you learn to spell things?" She listened attentively as Mrs. B. explained how the letters make sounds.

Mrs. W. reported that in general her children were beginning to ask "How do you spell this?" by the middle of June.

As these excerpts suggest, the most common type of print-related question tended to be "What does this say?" and "How do you spell ----?"

Playing "School" In School

> Randy and Jon sit at a lone desk in the reading corner, huddled over an alphabet letter book. They are looking at a page with all the letters on it, pointing to each one and reciting.
> (from Nov. 13th observation, Mrs. W.'s class)

This was not an unusual sight in the "literate environment" kindergartens, because reading and writing were social acts.

Children discussed book illustrations together. They pretend read to one another. They sometimes copied from each other when printing. They often showed each other what they produced. Sometimes they pointed out mistakes to one another.

Apart from collaborating, however, their social interactions when reading or printing or working with letters sometimes took on the flavor of "playing school".

That children want to play school is not unusual. As Sutton-Smith & Sutton-Smith (1974) point out in their book on children's play:

> Usually the actions in play reflect their own lives and those of people around them. There is enormous repetition of everyday themes - washing, eating, dressing, going to work
> (p. 237)

School, of course, is a major theme in the life of kindergarteners, and they like to play at it.

In most cases, this play must be performed outside of real school, however. It is rare that children are allowed to play school <u>in</u> school, especially during classtime. During most instructional periods, they are expected to remain in the rather passive role of pupil, responding to the real teacher's directives and questions. That the children themselves would play "teacher" with one another during this time is unthinkable.

No so in the "literate environment" kindergartens. There the learning atmosphere was such that it encouraged situations in which children could, indeed, play school while class was in session. The

opportunity to do so seemed yet another way in which the children were made to feel they could participate in an adult literate culture. The underlying message was that the real teachers believed they, the children, could also be "teachers".

Interestingly, the children used this role play as a means for drilling each other in literacy-related matters. In other words, they used learning as a theme for play, at the same time that they used play as a vehicle for learning.

One of the advantages that "playing teacher" afforded was that it allowed for quizzing. Children could practice the same skill over and over again, while the element of play offered a reason for the repetition.

The following is an example of "playing school", which was documented during a December 8th observation in Mrs. W.'s room. The children in this vignette eventually took turns being "teacher", and each time another child adopted the role, there was fresh cause for repeating the same material.

> Putnam remained at a table with the "red/fed/ded/bed/hed/sed" slotter (it was the beginning of booksharing period). Yon came over and was s ying the words; then Aaron came over and watched Yon. "Can I learn that, too?" he asked.
>
> Yon went through the slotter again with Putnam. As soon as he was finished he said, "Let's do it again." This time Aaron held the slotter and moved the initial letter strip; Yon and he both said the words (at this point Yon knew the words better than Aaron). Then Angela came over to the table and watched; she appeared to want to join in.
>
> At 12:43 Marlon joined the group and took the slotter to play "teacher". When Yon said "red", Marlon said no: "You gotta spell the sounds, not the letters." Then he took the slotter. "No man, watch me do it...Now I'm the teacher...No, say the sounds. I'm gonna show you how to do this." He moves the books from the center of the table, so everyone "can see". Then he shows Yon and Aaron the slotter, saying "Spell this for me. S-e-d spells 'sed'."
>
> At one point, Putnam whispered to Marlon that a good teacher says "That's good" when a pupil gets the answer right. Immediately he says "That's good" to Yon, who just read a word correctly.
>
> ...The three boys sustained interest in the slotter for 25 minutes. In that time, they must have gone through all the word combinations at least 10 times. They all switched roles as well, with whoever was holding the slotter playing "teacher".

After observing this rather long and concentrated practice session, the researcher (Putnam) could not help wondering how long a workbook activity focussing on the same task would have held the children's attention. Allowing children to play "school" <u>in</u> school, it seems, can have its academic advantages.

CONCLUSIONS

A key research question underlying this study was how inner city kindergarteners would respond to a curricular approach which attempted to incorporate some of the key experiences and conditions which apparently characterize "early reader" home environments.

The answer, we discovered, is that the children responded like "early readers". That is, they demonstrated the same kinds of interests and the same kinds of patterns in the way they went about learning.

The key response, of couse, was to read and write. Like "early readers", children in the "literate environment" kindergartens truly seemed "hooked" on books. They loved to listen to stories read aloud and to act them out. They often requested to hear their favorite stories repeated, and when the stories were read over and over again, they readily memorized many of their lines.

Sometimes they were more interested in printing, sometimes they were more interested in reading. Sometimes they were more interested in other pursuits. But overall, the children developed the habit of reading and writing, spending long stretches of time looking at books, pretend reading or printing.

After a period of exposure to "literate environment" activities, youngsters became interested in the mechanics of reading and writing. Like "early readers" they began to ask such questions as "What does that say?" and "How do you spell ---?"

While reading and writing, they liked to "play school" - a tendency reminiscent of the "early readers" in Durkin's California sample (1966). One apparent difference, however, was that the children in our study were more social in their pretend reading and writing behaviors, simply because the classroom environment provides more opportunity than does the home environment for collaborative efforts with friends.

What Was Achieved?

Only a few of the children made the breakthrough to decoding by year's end. For the others, what was gained was a considerable repertoire of print-related insights and competencies that should

pave the way for an eventual transition into decoding.

With respect to the direction of the chilren's print-related development, two patterns emerged, both of which corroborated previous research.

First, growth proceeded from global approximations of reading and writing to increasingly differentiated attempts. On this point, our observations confirm Clay's findings (1966,1975) when she studied the reading and printing behaviors of 100 5-year-olds during their entry year of schooling in New Zealand. They also confirm the pattern of literacy-related progress Bissex (1979) noted in her son Paul.

Secondly progress tended to occur on many fronts simultaneously. Our observations confirm that throughout the year, children in the "literate environment" kindergartens were developing: book handling behaviors and an awareness of directional principles; an understanding of the role print plays - that it tracks sound and "tells you the story," as Roy said; knowledge of letter names; knowledge of letter sounds; sight word recognition; metalinguistic awareness, both in the ability to segment speech (particularly at the level of the syllable), and in the ability to use terms like "read", "word", "letter" and "sound" appropriately; a facility for producing "book talk" (through pretend readings); and an increasing degree of control over a variety of print conventions.

There was no discernible sequence in which these various insights and skills were acquired. Letter name knowledge, for example, did not necessarily precede other kinds of print-related knowledge. Rather, literacy-related learning followed what Hiebert (1981) called a "unidimensional" pattern.

Implications for Curriculum Development

One of the most obvious implications of our study is that reading begets reading. When surrounded by a literate atmosphere in which books and print are valued in the ways we have described in this report, children become "hooked" on reading and writing.

Another implication - one which seems to contradict customary pedagogical assumptions - is that children can be trusted to direct much of their own learning process. When given the incentive and

freedom to attempt reading and writing in their own way, the children in this study generally knew how to pace themselves, how to experiment productively, what tasks to repeat, and what questions to ask.

In view of the considerable enthusiasm for literacy which the "literate environment" kindergarten children displayed, and in view of the considerable progress they made as they experimented with reading and writing, indications are youngsters' efforts at pretend reading and early printing should be viewed with greater respect.

It is time pretend reading was acknowledged as a legitimate starting point in the learning to read process. As we have seen, pretend readings are complex orchestrations in which pre-decoders simultaneously imitate the fluent reading voice of adults, draw on picture cues and personal recollections to build a meaningful story, and at the same time weave into their tale some of the syntactic structures characteristic of book language. Clearly, these productions are far richer demonstrations of "reading comprehension" than answers to the kind of factual recall questions which basal reading programs so often stress.

Along with pretend readings, children's early and seemingly crude attempts at printing also warrant a respected place in the curriculum. Not only did the children in this study gradually achieve control over a variety of mechanical conventions without formal instruction in printing, they also developed hypotheses about the properties of printed words in the process.

A final point: both pretend reading and early printing efforts fuelled the children's interest in literacy. Whereas most approaches to reading readiness fail to sanction attempts to read and write until children have been instructed in certain sub-skills considered important for success, the "literate environment" approach immediately sanctions such efforts. The result, it seems, is that children come to view themselves as readers and writers. In conjunction with this, they develop the habit of reading and writing - an enviable (though often overlooked) goal of any reading program.